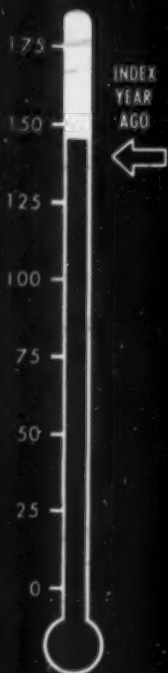


BUSINESS WEEK



AT&T's Frederick R. Kappel: Guiding a \$2-billion annual expansion (page 185).

A MCGRAW-HILL PUBLICATION

SEPT. 29, 1956

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Now every town
can strike it rich—*in color*

THERE'S MORE COLOR in your daily life today, thanks to new and better lacquers. One big reason for their increased use is Shell Chemical's development of *ketones*—a remarkable family of solvents with a tremendous "appetite" for nitrocellulose.

Ketone solvents cut production costs, because they permit use of low-cost diluents, yet dissolve *more* lacquer solids—

insuring greater coverage with each pass of the spray gun. Result: ketone solvents make it easier for lacquer formulators to provide handsome, durable, colorful protective coatings for hundreds of familiar products—from furniture to automobiles.

The ketone family of solvents is another Shell Chemical contribution to the improved quality and lower cost of basic consumer and industrial products.

Shell Chemical Corporation

Chemical Partner of Industry and Agriculture

NEW YORK



GENERAL BUSINESS

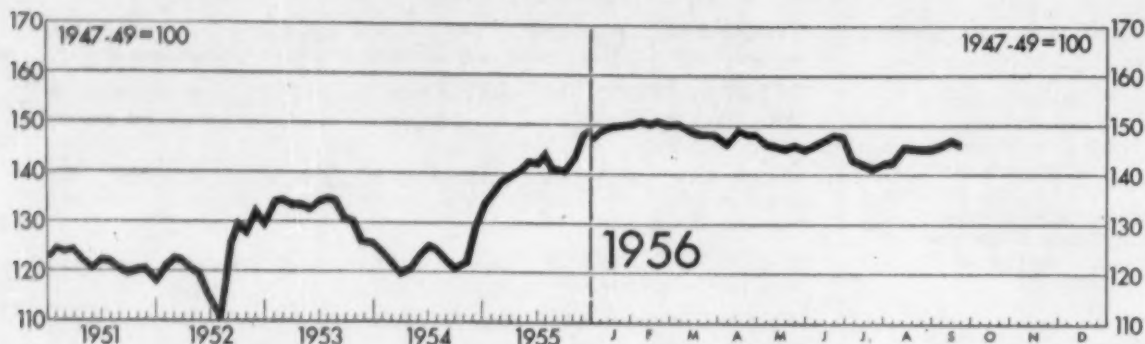
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FIGURES OF THE WEEK



BUSINESS WEEK INDEX (chart)

1946 Average	Year Ago	Month Ago	Week Ago	§ Latest Week
91.6	142.7	145.7	147.7	*146.7

PRODUCTION

Steel ingot (thous. of tons).....	1,281	2,341	2,389	12,477	2,466
Automobiles and trucks.....	62,880	151,804	89,086	186,738	57,889
Engineering const. awards (Eng. News-Rec. 4-wk daily av. in thous.).....	\$17,083	\$65,860	\$63,292	\$70,161	\$64,369
Electric power (millions of kilowatt-hours).....	4,238	10,756	11,340	11,339	11,482
Crude oil and condensate (daily av., thous. of bbls.).....	4,751	6,671	7,127	7,049	7,063
Bituminous coal (daily av., thous. of tons).....	1,745	1,662	1,647	1,746	1,775
Paperboard (tons).....	167,269	293,667	270,150	280,651	272,890

TRADE

Carloadings: miscellaneous and L.L. (daily av., thous. of cars).....	82	78	71	75	76
Carloadings: all others (daily av., thous. of cars).....	53	59	57	56	61
Department store sales (change from same wk of preceding year).....	+30%	+4%	+5%	+4%	+4%
Business failures (Dun & Bradstreet, number).....	22	171	215	203	262

PRICES

Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100).....	311.9	410.8	425.7	426.2	425.7
Industrial raw materials, daily index (BLS, 1947-49 = 100).....	1173.2	98.7	97.5	99.0	98.7
Foodstuffs, daily index (BLS, 1947-49 = 100).....	1175.4	79.2	81.3	82.1	82.4
Print cloth (spot and nearby, yd.).....	17.5¢	19.3¢	18.6¢	18.6¢	18.6¢
Finished steel, index (BLS, 1947-49 = 100).....	1176.4	153.9	168.6	168.6	168.6
Scrap steel composite (Iron Age, ton).....	\$20.27	\$44.83	\$58.17	\$58.83	\$58.17
Copper (electrolytic, delivered price, E & MJ, lb.).....	14.045¢	44.365¢	39.950¢	39.810¢	39.945¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$1.97	\$2.13	\$2.22	\$2.27	\$2.29
Cotton, daily price (middling, 1 in., 14 designated markets, lb.).....	**30.56¢	34.08¢	33.03¢	33.04¢	33.11¢
Wool tops (Boston, lb.).....	\$1.51	\$1.73	\$1.83	\$1.90	\$1.91

FINANCE

90 stocks, price index (Standard & Poor's).....	135.7	351.8	378.9	372.3	366.5
Medium grade corporate bond yield (Baa issues, Moody's).....	3.05%	3.58%	3.96%	4.07%	4.11%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate).....	¾-1%	2½-2¾%	3%	3½%	3½%

BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks.....	††45,820	56,263	55,007	55,777	55,908
Total loans and investments, reporting member banks.....	††71,916	84,516	85,857	85,868	85,843
Commercial and agricultural loans, reporting member banks.....	††19,299	24,570	29,182	29,554	29,694
U. S. gov't guaranteed obligations held, reporting member banks.....	††49,879	30,546	26,859	26,545	26,383
Total federal reserve credit outstanding.....	23,888	25,613	25,642	25,934	25,852

MONTHLY FIGURES OF THE WEEK

	1946 Average	Year Ago	Month Ago	Latest Month
Cost of living (U.S. Dept. of Labor BLS, 1947-49 = 100)..... August.....	83.4	114.5	117.0	116.8
McGraw-Hill indexes of New Orders (1950 = 100)				
New orders for machinery, except electrical..... August.....	N.A.	136	164	156
Construction & mining machinery..... August.....	N.A.	135	149	176
Engines & turbines..... August.....	N.A.	155	121	190
Pumps & compressors..... August.....	N.A.	130	204	179
Metalworking machinery..... August.....	N.A.	158	152	150
Other industrial machinery..... August.....	N.A.	110	140	120
Office equipment..... August.....	N.A.	110	146	136
New contracts for industrial building..... August.....	N.A.	171	214	219

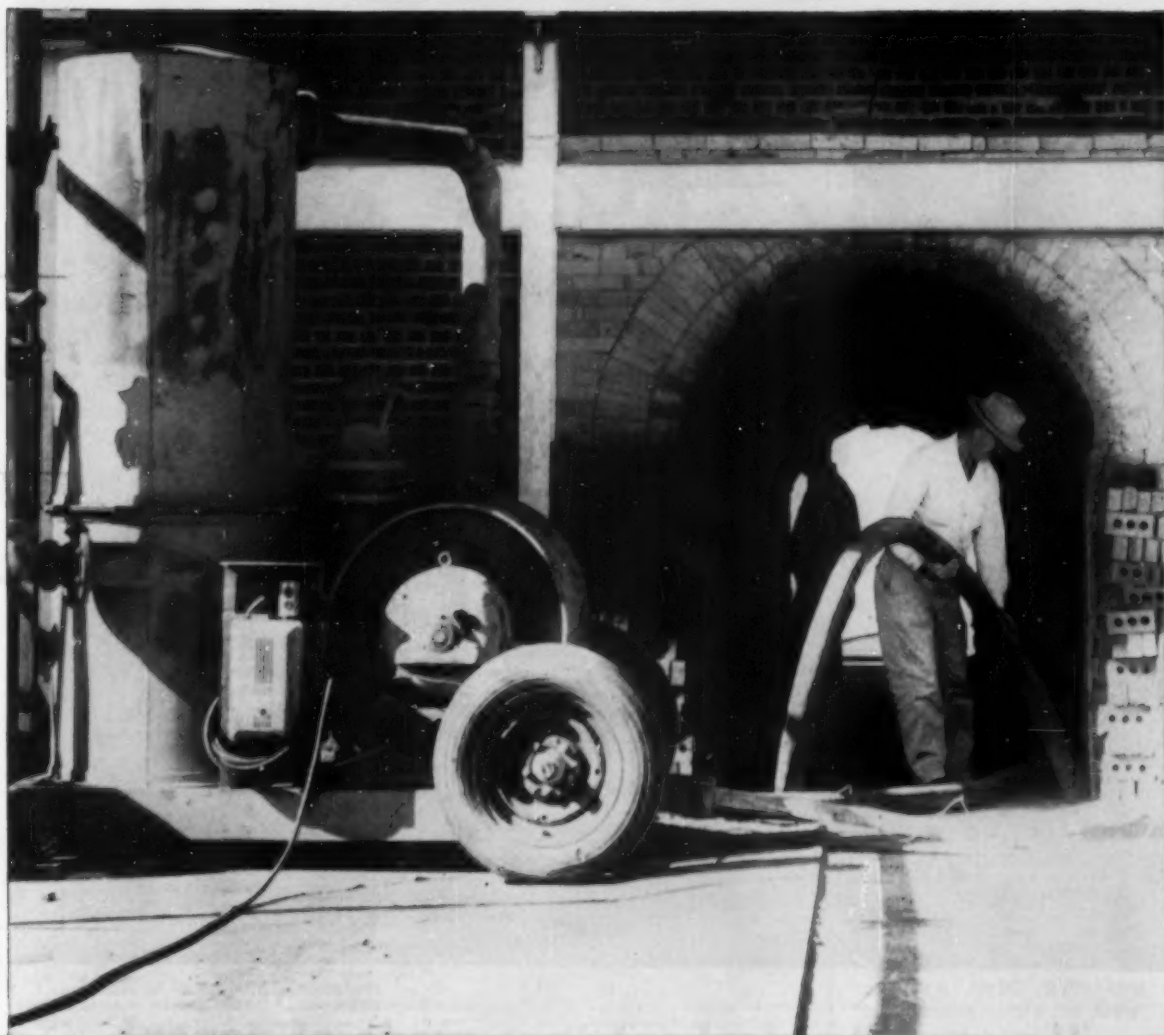
* Preliminary, week ended Sept. 22, 1956.
† Revised.

†† Estimate.
‡ Ten designated markets, middling 15/16 in.

N.A. Not available.
§ Date for 'Latest Week' on each series on request.

THE PICTURES—Bettman Archive—28 (top lt.); Carl Byoir & Associates, Inc.—146; CAT—90, 92; Continental Trailways Bus System—(top 2); I.N.P.—26; Herb Kratochvil—Cover, 28 (cen. lt. & top rt.), 29, 30, 119, 120, 121, 123, 185, 192; Jay Laviton—64, 66; Mack Trucks, Inc.—136 (bot.); Ed Nano—33 (rt. 3); Gene Pyle—53, 54; U. P.—36, 106, 164, 166; U.S.O.M., Lebanon—85; W. W.—27, 28 (bot.), 72.

B.F. Goodrich



Hose swallows pieces of hot brick

A typical example of B. F. Goodrich improvement in rubber

THAT machine is a king-size vacuum cleaner used to clean out brick kilns. As the man guides the flexible hose over the floor, powerful suction whisks up hot brick chips, sand and other abrasive particles, just as a home vacuum sucks up dirt. Fine, except that the flexible hose on which the whole idea depends couldn't stand the gaff.

One hose lasted *only 30 minutes* before the sharp, destructive brick wore holes right through it. For a while, the vacuum cleaner looked like one of those good ideas that just wouldn't work.

Then a B. F. Goodrich man heard

about the trouble, and suggested a new B. F. Goodrich hose with a special lining made of the toughest wear-resisting rubber known. It's so tough that, in many places, it outlasts the hardest steel 10 to 1.

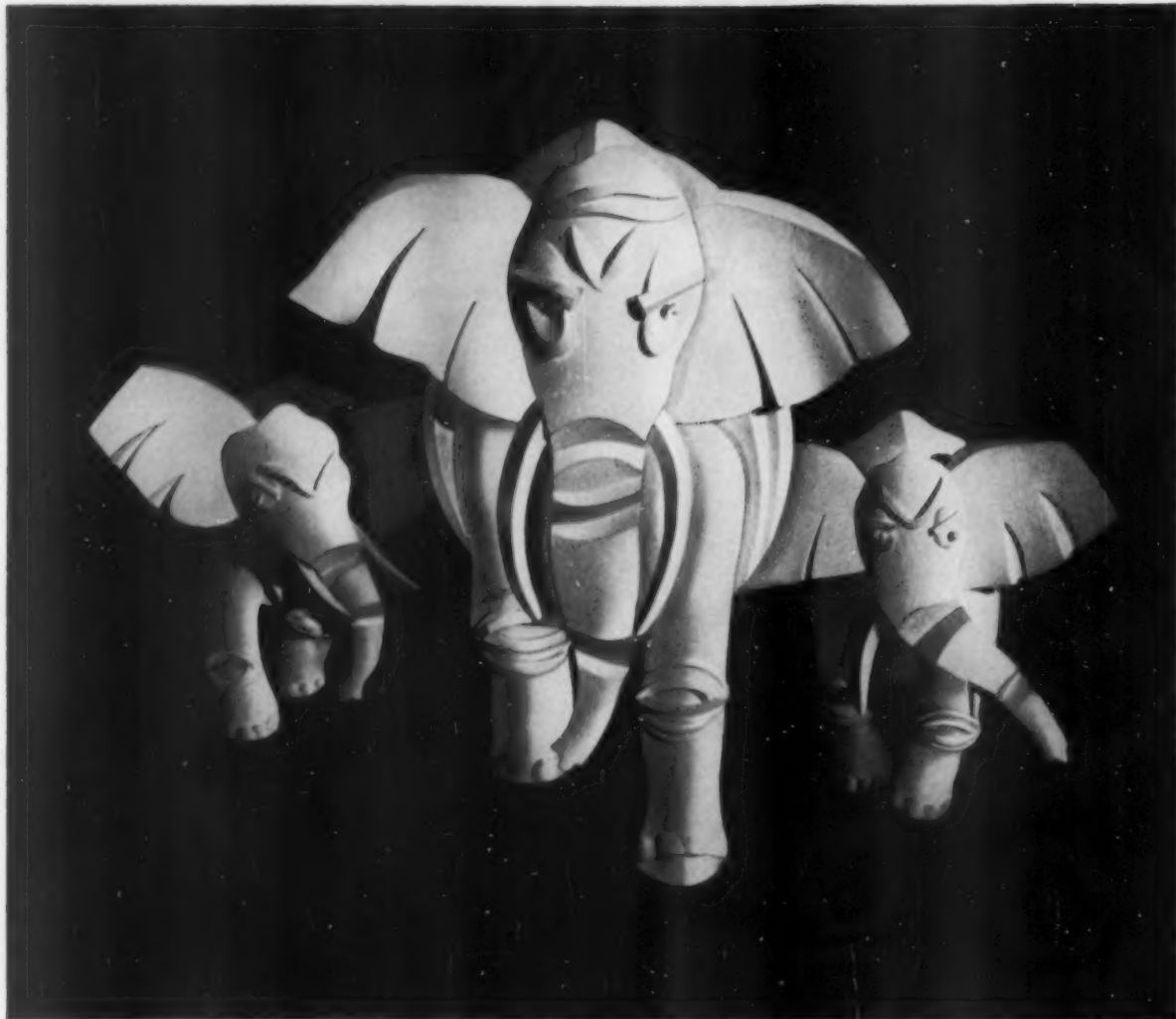
This B. F. Goodrich hose is now starting its third year of service. No holes, no repairs, no problems of any kind.

B. F. Goodrich has made hundreds of improvements in dozens of kinds of hose to make them last longer, cost less. Most improvements, while making the hose stand more abuse, have also made it more flexible and easier

to handle. B. F. Goodrich makes hose to carry almost anything—air, water, gasoline, steam, chemicals, and even dry materials such as flour or cement. Your B. F. Goodrich distributor is an expert at solving hose problems. So call him when you need help, or write B. F. Goodrich Industrial Products Co., Dept. M-764, Akron 18, Ohio.

B.F. Goodrich

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READERS REPORT

Runaway Trend?

Dear Sir:

The Aug. 25 edition of BUSINESS WEEK contained an interesting article dealing with the newest types of high speed printers that are being designed for use with electronic digital computers [BW—Aug. 25 '56, p87]. These new devices are reported to be capable of attaining output rates ranging from 4,000 to 10,000 characters per second. It is worth noting that these speeds are more than 1,000 times greater than the highest such speeds attainable only five years ago. In 1951, the Whirlwind I computer, which was designed and built in the digital computer laboratory of the Massachusetts Institute of Technology, had a maximum printing rate of only six characters per second.

However, I should like to raise a dissenting cry of protest against this runaway trend toward increasing the amount of data that can be prepared and spewn out by a digital computer. At the rate of 4,000 characters per second, a modern computer is capable of printing almost twenty volumes of the Manhattan telephone directory in a single working day. This is truly a remarkable achievement—but it would be more remarkable if anyone were to take the time to read over a fraction of this prolific production.

The modern executive is already buried under increasing masses of reports, memorandums and analysis. (A recent study that our organization conducted for a large corporation yielded the astonishing fact that the president of the company receives an average of more than 200 reports each day.) If the modern electronic digital computer is to fulfill its role as an "information processor" it is essential that more thought be given to increasing the information content and decreasing the volume of our daily reading material. The businessman's need is for fewer pages of more significant printed matter rather than for voluminous files of unapproachable data.

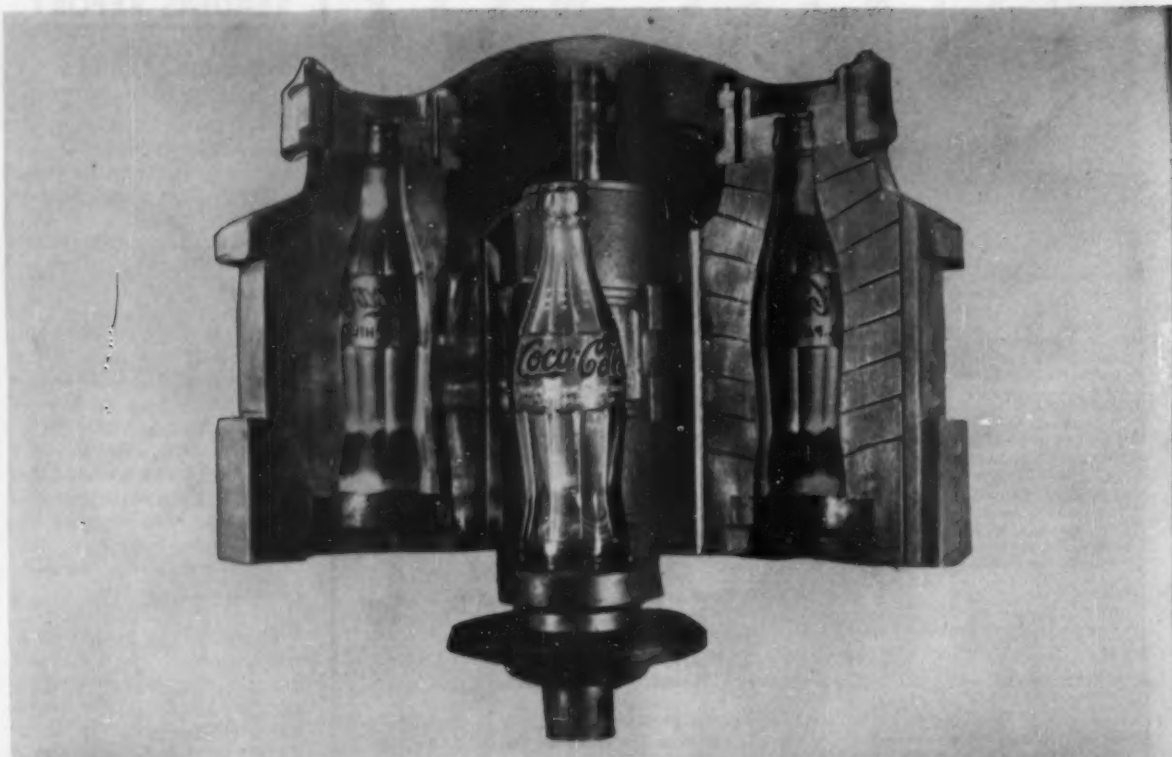
HERBERT T. GLANTZ

JOHN DIEBOLD & ASSOCIATES, INC.
 NEW YORK, N. Y.

Keep the Lid Off

Dear Sir:

Your editorial on small business [BW—Aug. 25 '56, p152] is to be commended. Instead of recom-



This glass mold, for a famous bottle, illustrates the fine surface finish and freedom from flaws and porosity. Good molding practice and the use of Chateaugay Pig Iron in every heat have reduced losses to less than 1% at Overmyer Mould Company.



REPUBLIC



World's Widest Range of Standard Steels

How Chateaugay Pig Iron helps glass-mold foundry cut losses to less than 1%

It takes a good pig iron to meet the rigid casting requirements of Overmyer Mould Company, Winchester, Indiana, producers of molds for manufacturers of glass containers.

The molds are machined and hand finished to obtain extremely smooth surfaces. Some molds call for a tolerance of $\pm .002$ to $-.000$. Therefore, the castings must be perfect from a density standpoint. The slightest flaw or evidence of porosity would cause them to be rejected. Yet, Overmyer is able to keep its loss rate under 1%.

How do they do it? By using Republic Chateaugay Pig Iron in every heat, including heats of nodular iron. The company has found through actual experience that there is no better nor more economical

means for insuring flaw-free, easy-to-machine castings.

Chateaugay is a low-phosphorus, copper-free pig iron. Its highly uniform distribution of chemical elements assures a dense, fine grain structure throughout every casting, regardless of size or shape.

Overmyer's foundry superintendent points out that in addition to providing good densification, fine surface finish, heat-resistance, high strength and top machinability, use of Chateaugay results in a high carbon iron, which supplies lubricating qualities so essential in glass molds.

A Republic Pig Iron Metallurgist will be glad to show you how Chateaugay consistently outperforms other pig irons. There's no obligation. Just mail the coupon.



LESS SPACE is required for storing a wide variety of parts when you use Republic Wedge-Lock Steel Shelving. Joints are designed to grow tighter as load increases, permitting higher stacking without distortion or instability. Result is efficient use of floor space plus easy rearrangement to meet changing requirements.



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MORE TYPEABLE, MORE
PRINTABLE, MORE WRITABLE,
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created a demand for specific paper qualities best obtained by *blending* different papermaking fibers.

To meet this need, the fine paper industry has made countless attempts to unlock special fiber qualities that nature grows in northern hardwoods. Now Hammermill has found the key—in the development of the exclusive process that produces Neutrancel pulp. By this process Hammermill—and only Hammermill—extracts from hardwood its sturdy cellulose fibers with all their papermaking qualities intact.

Neutrancel's special properties blend with other quality fibers to bring to

Hammermill's line of business and advertising papers clearer, more attractive formation. See photos at right. You can see for yourself how Neutrancel provides a smoother, velvety surface for finer printing, typing, writing and carbon copies. And Neutrancel lends increased visual and printing opacity, greater bulk—while assuring the maintenance of the excellent strength and durability for which Hammermill papers are known.

Development of new papermaking processes that benefit the printer and paper user is an old tradition of the Hammermill Paper Company. Only a



UNLOCKS THE SECRETS OF HARDWOOD business papers

few months ago, Hammermill-invented centrifugal pulp cleaners were installed to provide new, outstanding cleanliness to all Hammermill papers. To that important quality improvement is now added the development of Neutrancel—a \$6,000,000 step forward to bring you Hammermill papers that 1) print better; 2) type better; 3) look better.

The improved qualities that Neutrancel imparts to Hammermill papers are available now and for the future. Approved tree farming methods, practiced in Hammermill's forests, assure the perpetual growth needed for a continuous supply of Neutrancel pulp.

You should see the improved Hammermill papers for yourself. Ask your printer to show you samples. Or, send the coupon at right, attached to your business letterhead. We'll send you a sample book of the new Hammermill Bond—foremost among the score of Hammermill grades that now contain exclusive Neutrancel® pulp.

...yet

HAMMERMILL
Papers

with Neutrancel's finer fibers, cost no more

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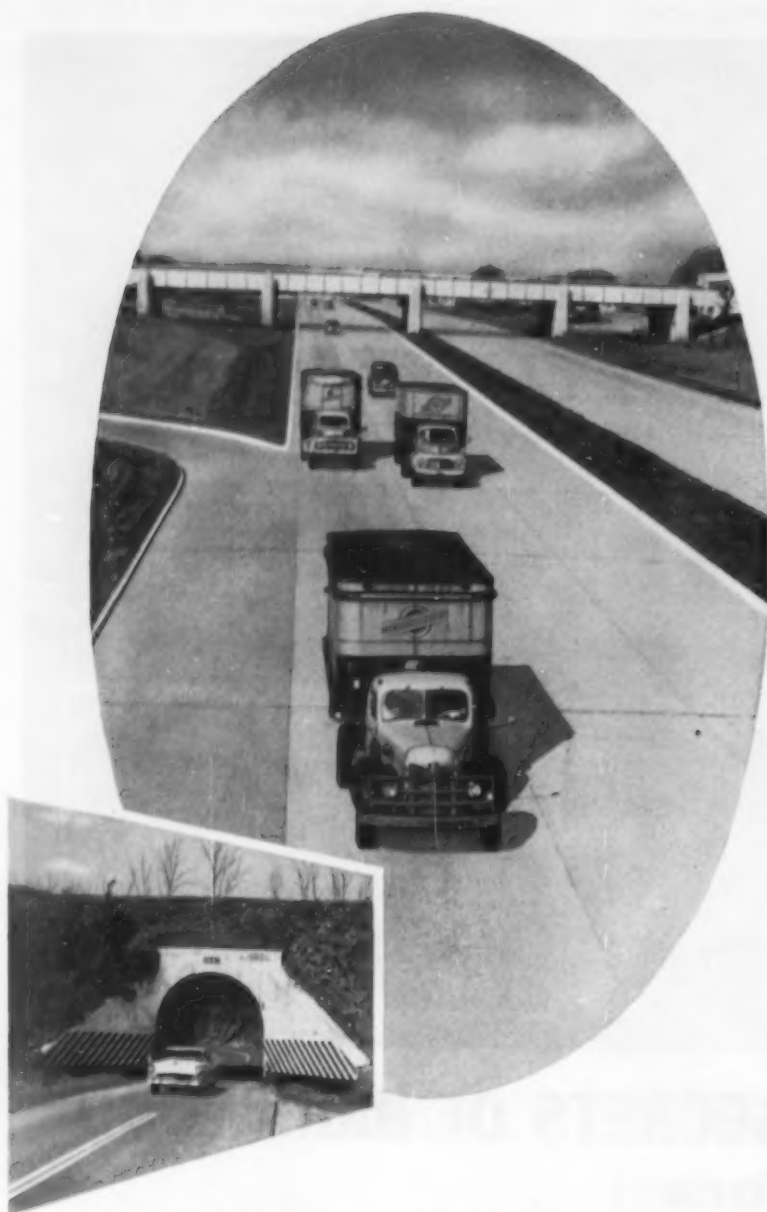
Please send me free a sample book of
the new Hammermill Bond made with
Neutrancel pulp.

NAME _____

ADDRESS _____

CITY _____

ZONE _____ STATE _____



How highway engineers increase your security on modern roads

Contrasted above are the narrow, one-way underpass and sharp, blind turn typical of old roads and the wide, straight, free-vision underpass engineers design into modern roads. In building thousands of miles of new, heavily-traveled roads faster than ever before the highway engineer faces greater-than-ever problems. He needs your understanding and support.

And remember that concrete's long service, low upkeep and proven security make it the logical pavement choice.

PORTLAND CEMENT ASSOCIATION

33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

mending legislation against big business to keep it from becoming bigger, it recommends help for small business to make it bigger.

Big business has made the United States the powerful nation it is today. Any attempt to throttle it, to stunt its further growth, is a serious mistake. In my opinion, we must maintain the same freedom in which big business has grown to its present size. To put a lid on it—as, indeed, to attempt in any way to legislate a *status quo*—could be disastrous.

We must recognize, I think, that what we call big business is not in truth big. In fact, it is small. In relation to Soviet Russia, which is one monstrous corporation, American "big business" is tiny. In relation to what it could become, what it will become if we are smart enough to let it, it is still but an infant. . . .

Small business has many advantages over big. The principal advantage is in the fact that a small company can move more quickly. It is not in danger of being immobilized by its own size, like the great dinosaurs that were just too big to live efficiently.

Small business, furthermore, can put itself in a position to gain all the advantages now enjoyed by what we call big business. Small companies can create management "pools" or executive teams by pooling their resources to hire top notch men. Such a team, as good as or better than any now employed by a large corporation, might serve 50 to 100 small outfits.

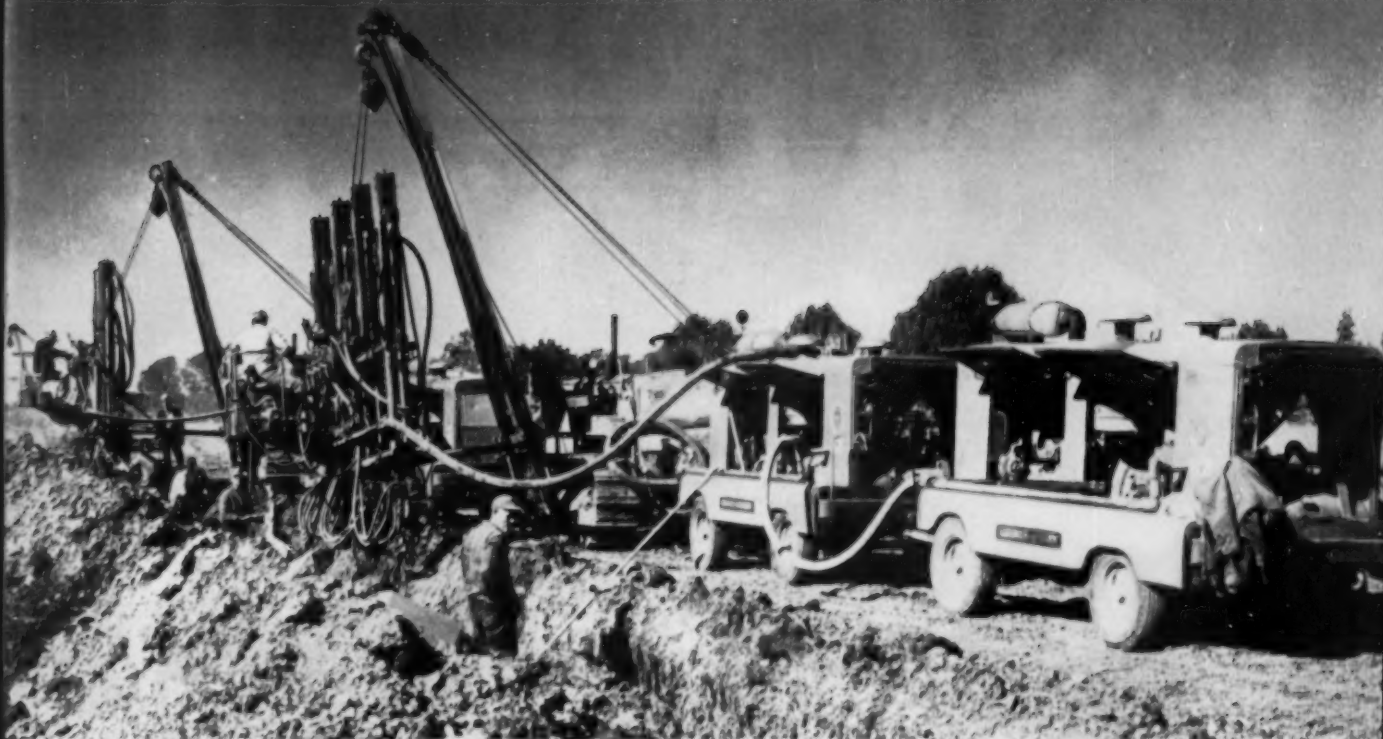
Under such cooperative management, it would be easy for small companies to engage in other forms of cooperation. They might pool their warehousing facilities, their trucking, engineering, research, and distribution.

It would then be time for the government to step in with its massive help—either in the form of eased credit for small companies or in the form of knowledge; economic research, engineering research, or other kinds of idea development.

As a member of such a pool, a small company would gain prestige. This might help it obtain private financing more easily than at present. It would also help the small company get orders for its goods, for the customers would have greater faith in the management.

Thus, small companies would grow large. The same factors of initiative, creative ability, and

Gardner-Denver . . . Serving the World's Basic Industries



Every 3 minutes—one operator drills 4 holes through 6' of solid rock with this Gardner-Denver "Quadril."

Another "super-inch" expands natural gas empire

El Paso Natural Gas Company is expanding its operations by installing 338 miles of 34" "super-inch" gas pipe between Farmington, New Mexico; and Topock, Arizona on the Arizona-California border. Construction men call it "one of the largest rock pipeline jobs in the country to date."

So we find Gardner-Denver equipment marshaled for the task: rotary portable air compressors, special pipe-

liners' rock drills known as the "Twindril"® and the "Quadril," and other pneumatic construction equipment.

Job conditions are rugged—snow, desert, high altitudes, steep mountain grades, temperatures to 120° F. But Gardner-Denver dependability enables the crew to roll along drilling an average of 2250 holes per day in solid rock. Gardner-Denver Company, Quincy, Illinois.

Gardner-Denver "Twindrills" help open up solid rock to make a trench for the new 34" natural gas line pipe.

Up hill or down, Gardner-Denver rotary portables supply compressed air power wherever the rock drills are working.

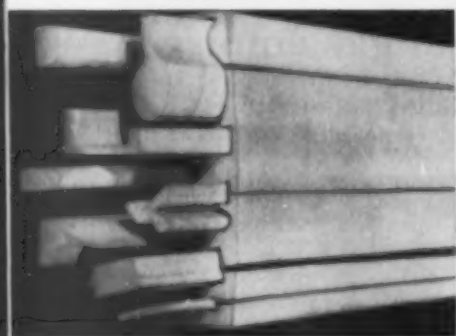
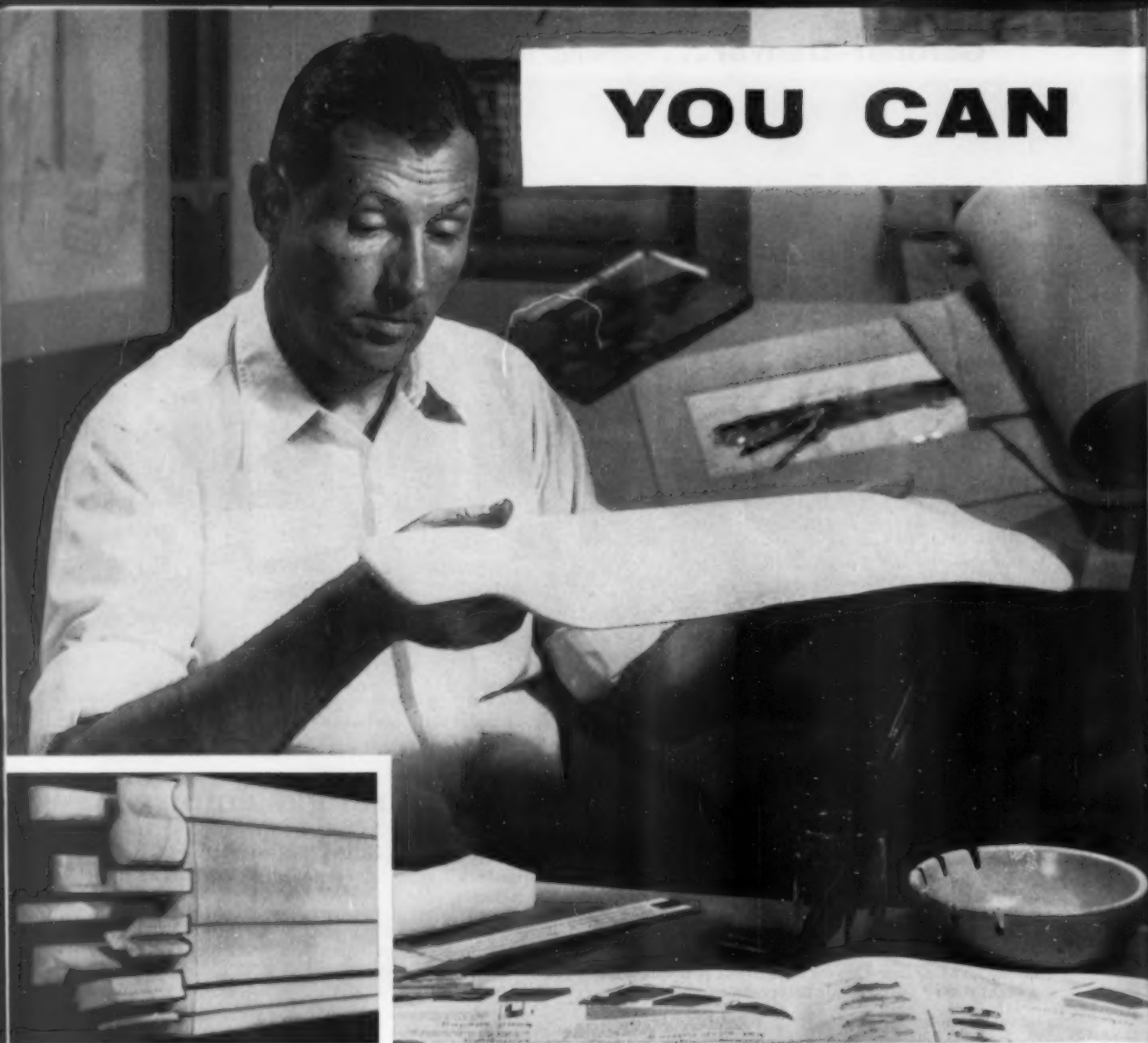
A helping hand for industry . . . this Keller Tool multiple nut setter does 3 operations at once—automatically.



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Urethane foams are an entirely new group of synthetic materials, developed by Mobay for modern fabrication and design techniques. Pronounced structural strength, marked stability to heat, dry-cleanable and washable, good insulat-

ing properties (thermal, sound and electrical) and ability to bond during foam reaction to almost any type of material are among their most outstanding properties.

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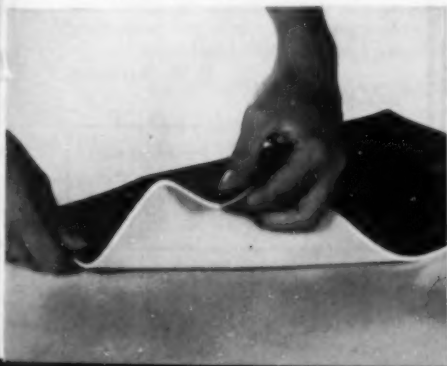
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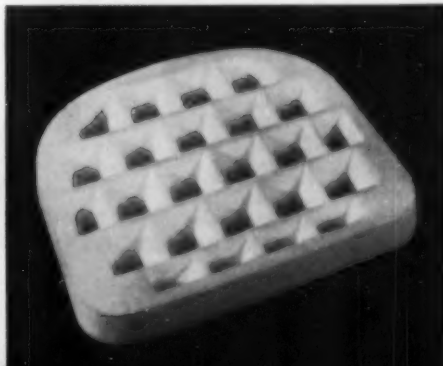
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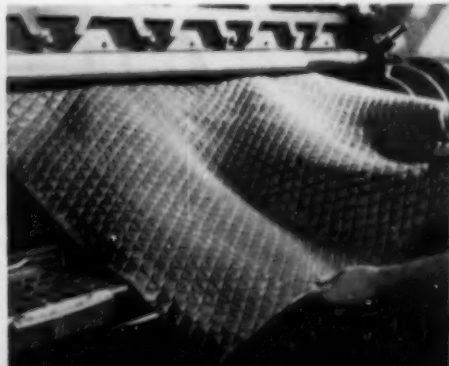
You can bond it securely to almost anything with standard cements . . . or heat-seal it to many materials . . .

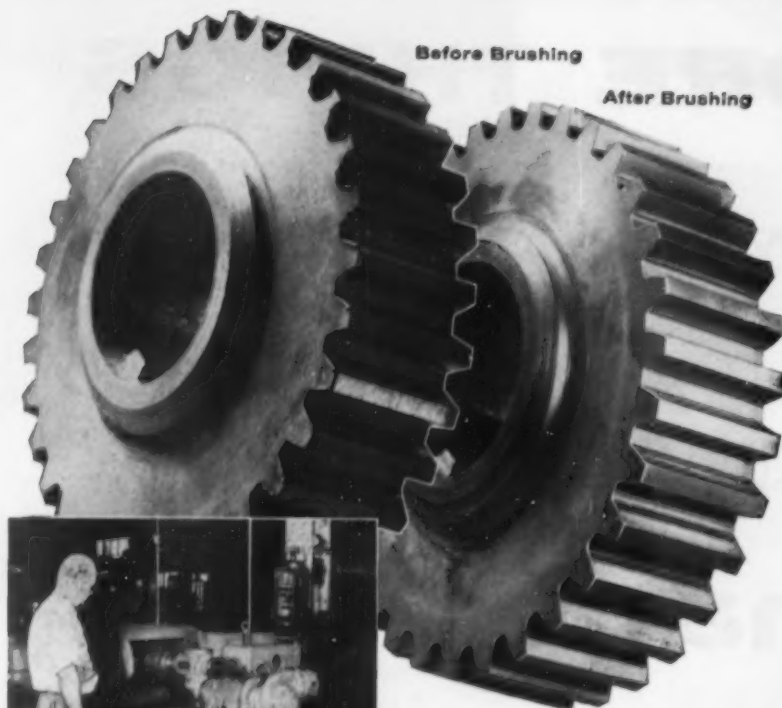


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enterprise that made today's large companies grow would act in favor of today's small ones.

Today's small businessman must realize that he has the same ability as yesterday's small man who grew large. If he uses the ability properly, he can grow far beyond anything we know today. . . .

JULIUS STULMAN

LARCHMONT, N. Y.

Pass the Salt, Please

Dear Sir:

The lament of reader John Bergen [BW—Sep.15'56,p10] about the many graduate stenographers who "can neither spell nor use a dictionary, with many thinking punctuation marks should be supplied from salt and pepper shakers" interests me.

Back in 1802 Timothy Dexter, an eccentric merchant of Newburyport, Mass., wrote a satire called *A Pickle for the Knowing Ones*. The book itself didn't have any punctuation but Dexter put several pages of commas, periods, and question marks on the back pages and invited the reader to "salt and pepper to taste" (so that readers could 'pepper and salt it as they please,' according to another source).

Would that explain how they get that way—those stenographers guilty of "thinking punctuation marks should be supplied from salt and pepper shakers."

VINCENT B. MALONEY, S.S.E.

ST. MICHAEL'S COLLEGE LIBRARY
WINNOSKI, VT.

Nothing for Nothing

Dear Sir:

Re Michigan's Auto Crown [BW—Aug.25'56,p52] as your article implies, Michigan's doldrums are akin to those of the coal and shipping industries—labor imposed. While with a major chain organization I noted that Detroit wage rates were highest in the nation—but we also had to boost prices 3% to 5% above any other locality, to meet the payroll. Hoffa and Reuther are merely the latest manifestation of the principle amply demonstrated by Lewis and Bridges—you can't get something for nothing for very long.

P. S. BARROWS

DEL MAR, CALIF.

Letters should be addressed to Readers Report Editor, BUSINESS WEEK, 330 West 42nd Street, New York 36, N. Y.

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PROGRESS—THROUGH GROWTH IN GROWTH INDUSTRIES

J. A. MILLER REPORTS ON TUBELESS TRUCK TIRES

J. A. Miller, Miller Petroleum Transporters sales manager. His father (standing), H. D. Miller, president, founded the company in 1942 with one tank trailer. Today they operate 150 units performing all kinds of petroleum hauling.



Q. Mr. Miller, given a choice between a new truck equipped with tires with tubes and the same truck equipped with tubeless tires, which would you buy?

A. "GIVEN A CHOICE, WE WOULDN'T BUY A NEW TRUCK WITHOUT TUBELESS TIRES"

says J. A. Miller of Miller Petroleum Transporters, Ltd.

Miller Petroleum with home offices in Jackson, Mississippi, was one of the first fleets in the South to equip with tubeless truck tires. Their experiences with them may serve as a basis on which other truckers may take steps to derive similar benefits. This is particularly true since Miller Petroleum Transporters' operations include nearly every type of hauling . . . over the road, oilfield hauling, and intercity-terminal deliveries. The following interview with Mr. "Jaime" Miller, formerly in charge of Operations and Equipment, should answer many questions of interest to the fleet operator regarding the advantages of tubeless tires.

Q. What were your conclusions about the wearing qualities of Firestone tubeless tires compared to tires with tubes?

A. Without exception, Firestone tubeless truck tires gave longer mileage than the other tires. They were better on the road and better in the oilfields. Our off-the-road operations gave them their best test because we had experienced many difficulties with tires with tubes. Our oilfield tractor-trailer units had been having four and five punctures a day before then. We even had them carrying two spares. You can see what troubles a flat tire in the oilfields can cause. A rig might sit for hours with a payload until repairs could be made and the rig rolled again.

Punctures were a real headache and were really costing us money.

Q. Did Firestone tubeless truck tires solve your problem?

A. Yes, they did. Punctures didn't stop the units from traveling. The drivers were able to make their runs on schedule and then have the punctures repaired after arrival at the terminal.

Q. Do you have any tips for truck operators who are planning on buying tubeless tires?

A. Yes, there will always be problems with any tire. For instance, any truck owner planning to use tubeless tires should standardize his rims. And, changing tubeless tires is very simple and easy if you use the right tools. Use of a hammer or other improper tools in changing is the easiest way to damage a rim or the tire bead. After all, you only need a pair of vice grip pliers and two special tubeless tire irons.

Q. Well then, would you recommend Firestone tubeless tires for truck operators?

A. There's no question about it . . . we certainly do.



"Standardization" and "Progress" are key words in the Miller business philosophy. The company was the first in the South to install the key stop unloading system. Above, L. E. Jones, Miller Maintenance Mgr. (standing), checks out tire pressures with a driver. His comment on Firestone tubeless truck tires: "We've never yet had one ruined from having to run flat due to a puncture."



Maximum payloads are a major objective of Miller Petroleum Transporters. Mr. Miller says, "We can get approximately 50 gallons more payload with the weight savings we obtain by using tires without tubes. That's 300 pounds per load or about \$200 per year per unit." He adds, "Another advantage is that Firestone tubeless tires can be changed faster."

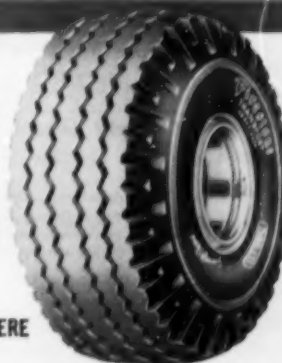


Trucking profits get a break when worn tires have sound bodies that can take several recaps. Eliminating flats from punctures helps make this possible. Miller's Terminal Manager at their Natchez office reports: "Reduction of flats 50% in oilfields with Firestone tubeless tires for off-the-road duty."

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cent* of accidents like this when he has the full backing of management. He knows which rules work. He knows *quality* protective equipment and how it pays off.

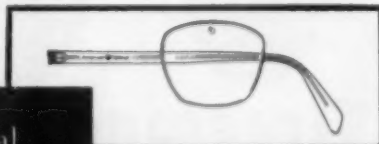
In uninterrupted production, lower insurance costs and high plant morale he can *make money for you* as surely as a top administrator or salesman.

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BUSINESS OUTLOOK

BUSINESS WEEK

SEPT. 29, 1956



Housing is due for another whiff from the government's oxygen bottle. Obviously, Washington is concerned by the shrinkage in demand for homes (page 31).

That is clear in government moves (1) reducing down-payment requirements moderately, (2) making more credit available to savings-and-loan associations, and (3) easing the rules on resale of mortgages to Fannie Mae—the Federal National Mortgages Assn.

Home builders welcome the moves. But it's doubtful that slightly easier credit will make any great change in the number of homes to be built in 1956.

Coldly speaking, it may be just as well that home building has fallen off a bit this year.

If inflation was a danger, the slippage in housing certainly has relieved some of the pressure. A housing boom roaring along at last year's rate might well have pushed us beyond the limits of both manpower and materials.

And there's another angle. We may have created some worthwhile pent-up demand (or at least staved off overbuilding) for the relatively lean period in housing demand that looms ahead.

The deck is stacked against any immediate repetition of 1.3-million-plus housing years like 1950 and 1955:

- Most of the postwar shortage in housing (though not in all types and sizes of homes) had been made up by the time 1956 started.
- The number of new households being formed (and demanding a place to live) will be at low ebb at least through 1960.

New studies by the Census Bureau show the trend in households. It's something to think about.

In the immediate postwar years, the high rate of marriages and of "undoubling" had new households zooming at a rate of 1½-million a year.

More recently, the average rate has been around 850,000.

By lowering the average age of marriage, we "borrowed" from future household formations. That, plus the slim numbers coming to marrying age, will limit new households to between 525,000 and 775,000 for the next few years.

Should households grow at the lower range of the Census estimates, additions between now and 1960 would rival the lowest rates we have seen in this generation: 500,000 during World War II and the 540,000 average annual increase during the depression-ridden 1930s.

Growth along the higher ridge of the Census estimates would still leave the annual increases 10% below recent years.

Even after 1960, the growth rate in households may be too low to satisfy suppliers of appliances and home furnishings, to say nothing of the home-building industry.

It will top the 1957-1960 level, to be sure. But the gain may be little more than 15% to 20%.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
SEPT. 29, 1956

We will be approaching 1970 before Census foresees households again being formed at a rate between 900,000 and 1.2-million a year—and providing the market a lot of people have been expecting much sooner.

Of course, demand for new homes doesn't depend entirely on the formation of new households.

Housing starts in the last half dozen years have been running about 1.2-million. Household formation has averaged only 833,000.

How do you get housing demand in excess of the number of new households formed? Nobody knows all the answers, but you can spot some of the forces at work:

High incomes have surely put a lot of extra push in postwar housing markets. More cramped families have been able to afford upgrading.

Slum clearance and obsolescence has meant relocating displaced families.

More oldsters, with better pensions, have kept their homes after retirement. This has meant fewer for-sale signs.

Farm-to-city moves have dropped the number of farm households some 12% since 1947. This has meant some 100,000 migrant families each year swelling the demand for urban housing.

Not all of the housing stimulants will stay as potent in the next few years. Take the farm migrants, for instance. Even if farm families continue to move to the city at the same rate, this would yield only 60,000 a year. The absolute level of farm families is lower now than when 100,000 a year were moving.

—•—

Here's how residential building looks for the year to date:

- Actual units started were about 783,000 for the eight months through August vs. 943,000 in the same eight months last year. That's a 17% slide.
- Value of new homes going into place was \$8.7-billion through August this year vs. \$9.8-billion last year. That's only an 11% drop, but building costs are up about 5% over a year ago. And some contractors are building bigger units.

Awards for new residential building were again disappointing in September, judging by early reports.

August had looked better. But, when the September totals get on the books, awards for the year to date will be 11% behind 1955. That's about the same lag that June and July showed, according to Construction Daily estimates.

Builders have turned markedly less optimistic about home building in the last few months.

Early this year, awards were sluggish, but a lot of work was being planned, awaiting a better market climate and easier financing. Work going into backlogs was up 40% over 1955 through May, according to Construction Daily.

Backlogs continued to grow during June, July, and August but much more slowly than in the same months a year ago.



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with plenty of future**

Movable Hauserman Interior Walls

Here's real proof that an office can be both distinctively beautiful and efficiently businesslike. Its beauty is achieved by combining the boldness of fresh, lively colors, the richness of simulated wood paneling and the attractiveness of good architectural design. Its long term efficiency is assured by having Movable HAUSERMAN Interior Walls.

The movability of HAUSERMAN Walls provides profit-conscious management with a low-cost means of quickly rearranging office layouts to meet requirements that inevitably change. Also contributing to efficiency, is the low cost of maintaining HAUSERMAN Walls. Their beautiful, low-gloss, baked-enamel finish never needs repainting... just periodic soap and water washing.

For further evidence of HAUSERMAN economy, ask your secretary to write for the free booklet, "How Eight Companies Saved \$595,363." Or, better yet, consult the Yellow Pages, and call your nearest HAUSERMAN representative today.



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Handsome steering wheels like these, made of colorful Tenite Butyrate, add a luxurious touch to most makes of American cars.

And a pleasant touch it is, too: Wheels of Tenite Butyrate have a lustrous, dirt-resistant surface and remain smooth and comfortable in summer and winter. A firm grip is further assured by molded-in finger grooves on the underside of the wheels. And because Tenite Butyrate's color goes all the way through the material, these beautiful steering wheels retain their rich appearance throughout the life of the car.




So popular is Tenite Butyrate among both car designers and owners, it is used for a great many other automotive applications. You'll find it in arm rests, window regulator handles, control knobs, brake handles, and other interior automobile appointments.

The automotive industry is only one of many fields that can profit from the use of Tenite Butyrate — as well as Eastman's other two plastics, Tenite Acetate and Tenite Polyethylene. Whether you're seeking a material for demanding duty or lasting beauty, consider how you can use the hard-to-find combination of properties offered by Tenite plastics. For more information, write: EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSFORD, TENNESSEE.

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"The money National Accounting Machines save us — and the valuable information they furnish so promptly — have been helpful to us in maintaining our position in this field. We estimate our \$44,000 investment in National machines is returned to us in savings at the rate of 102% annually.

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President


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- 
- ▷ "Can hardly wait to close up a whale of a year in 1956 so we can get at what ought to be a real whale of a year in 1957."
 - ▷ "Our program is definitely bullish."
 - ▷ "Anybody in textiles that tries to work out a budget for anything but capital expenditures is crazy."
 - ▷ "Some of the indexes I get don't read so good, but I guess things will be at a high level again next year."
 - ▷ "You run into a sort of half-hearted Cassandra every now and then, but I think he thinks it's fashionable to be a little gloomy."
 - ▷ "You can't sit back and consolidate. You have to run like heck just to stand still today."
 - ▷ "1957 will be a good year to play the hand boldly."

Business Sees a Sunny 1957

U.S. businessmen, looking past the yearend corner that looms not far ahead, see another good year coming up in 1957—a year of rising sales curves, continued expansion, a general high level of business spurred by an ever hotter race to get out in front of the competition with something new.

With annual budget-making time for companies in the offing, this is the

season when executives train their binoculars on the coming year to get an over-all picture of what's ahead before they sit down to their detailed charts and figures. To find out how 1957 looks from here in this executives'-eye view, BUSINESS WEEK reporters in all parts of the country talked this week to businessmen in companies big, small, and medium-sized, representing a cross-

section of all lines of the nation's industrial activity.

The quotations above are the sort of thing that kept resounding in the reporters' ears. The words might be more or less glowing, according to the individual businessman's temperament. There were some qualifications about "at least for the first half" of 1957. There was even some talk here and

there about "weakness" in the second half—but when you listened closely this had a big "if" behind it. There was almost universal agreement that money would be tight—and an equally widespread agreement that tight money would not hold business back.

But all minor reservations were drowned out in the bullish chorus, which echoed the words of a small Pennsylvania electrical equipment maker, that 1957 will be a year to "act big, think big." Even a Southern cotton textile man who had qualms about the second half thought "1957 will rank well up among our leading years." All in all, you could sum up the country-wide reports with this one from San Francisco:

"About the most pessimistic remarks turned up here were several predictions of a continuation of business at the present level."

• **Solid**—Of course, business still has to translate these over-all views of 1957 into detailed budgetary estimates. But the tally of executive thinking—the assumptions and policies on which businessmen are basing their 1957 budgeting—gives the first preview that has been available of the businessman's outlook for next year.

The bullish viewpoint it reveals is no on-the-surface optimism, but is backed up by solid reasoning. Businessmen throughout the country see two big factors working for the 1957 push ahead:

• Continued growth and expansion of industry to keep up with long-range growth in population and rising consumer incomes.

• A stepping up of the competitive race, with companies bidding for a bigger and bigger share of the growing market, and pushing new products to win the customers from the competitor.

I. Blueprints

When you start to look at different parts of the over-all picture, you find varying degrees of sunlight—ranging from brilliant, almost blinding, to a bit on the hazy side—but few spots in shadow. That variety shows up in the blueprints the companies are beginning to work out for 1957.

• **Sales**—As far as estimates of sales prospects go, the sun is pretty bright, and it's spreading its rays around pretty evenly. The survey of company thinking turned up only one company—in Ohio—that bleakly predicted a drop in its sales. In neighboring Pittsburgh, a capital goods manufacturer sees prospects no better than 1956—simply for the reason that it's now bumping up against capacity.

But those are the exceptions to the general run of reports, which range from "topping the 1956 record" in

Philadelphia and the "biggest year we've ever had" for a Louisville company to the Los Angeles report of "no exceptions" in a forecast of sales rises by all companies tallied. On a percentage basis, expected sales increases throughout the country run from around 3% up to 10% or 20%—with one California maker of specialized electric equipment confidently awaiting a 50% jump.

• **Expansion**—Expansion plans are basking in the 1957 sunlight, too, but the degree of brightness depends on the industry involved and the state of the particular company. Around Houston, for example, you find plant expansion plans booming; an oil company "expects continued vigorous expansion," and a gas pipeline official says "we certainly plan to keep on making major additions to our system." Far to the north, around Buffalo, there's a similar expansion splurge. And on the whole, the expansionists have the floor.

But a big cotton firm answers questions about possible 1957 expansion with a flat "No." And a Midwest food processor that is busy "digesting acquisitions" is probably typical of a number of others in a hectic merger era.

• **Inventories**—The inventory picture, too, varies from industry to industry—with the accent on reducing rather than building up. Perhaps most typical is this from a Southern chemical company: "Our inventories are not exactly going to be hand to mouth. But we are certainly not going long. I'd say a medium position."

II. That Money Tightness

There's one thing in the 1957 picture on which almost no one disagrees.

"The money market will remain tight for some time," says a big California oil company.

"The only thing I can see bad in the picture is the shortage of money," laments an Atlanta manufacturer.

From Philadelphia: "The chief characteristic of 1957 will be continuation of 1956's tight money market—regardless of who wins the election."

And in Houston: "No one looks for money to loosen up."

• **No Holdback**—But the reports are equally emphatic in declaring that tight money or no tight money, business will expand in 1957, and 1957 will be a good year. And almost no one expects any trouble in getting needed money.

An Eastern ores and metals firm that plans bigger expansion in 1957 than this year says, "Even if we have to go to the banks and pay higher interest than we ever have, we wouldn't cut back on our planning." A capital goods maker expects to wince a bit at the cost, but anticipates no real difficulty in borrowing what it would need to carry through expansion plans.

The story of "no difficulty expected" is general, though a Southern chemical company thinks small companies and speculators might feel the pinch more.

• **Dissenters**—There's some dissent on this point. In Milwaukee, "nearly everyone looks for a tightness in working capital." In the Cleveland area, tight money looks like a real hurdle that may trip up the national economy in second-half 1957—if the Federal Reserve Board doesn't relax its policy.

Others see some different hurdles closer at hand. A Pittsburgh steelman thinks some businessmen will be inclined to trim sail if the Democrats come up victors in November. There's a similar feeling in Houston; for example: "You understand all of those answers are based on our belief that Ike will win."

There's mild dissent on other points, too. Some Buffalo companies expect profits to be down somewhat in 1957, because of rising labor costs.

• **The Ayes Have It**—But these are definitely minority voices. And even the pessimists don't go all out. Some Cleveland companies that fear the effects of tight money are nevertheless confident of a boost in their own sales, or are planning to borrow to enlarge facilities. In Louisville, a note of caution in budgetary thinking is underlaid with "great expectations." And the nationwide majority booms out a loud "Aye" in support of the normally conservative Houston oil company that asserts: "We expect continued vigorous expansion."



Paging Motorists

The French motorist above stops to read a giant illuminated signboard that tells him someone is trying to get in touch with him. The service, called "autogram," enables a person to contact motorists traveling on two major highway systems by dispatching a telegram from his local post office. The signboards alert the wanted motorist to stop and pick up the message and, if he likes, telegraph an answer.

TV Networks on the Pan Again

In New York this week, the year's second big Congressional investigation of the TV industry got into full swing. Frank Stanton (picture), president of Columbia Broadcasting System, Inc., and Robert Sarnoff, president of National Broadcasting Co., went before Rep. Emanuel Celler's House Antitrust subcommittee to cover again some much-traveled ground about network operations and practices. Robert E. Kintner, president of American Broadcasting Co., appeared last week.

Though well broken-in as committee witnesses, the three network executives were talking into a tricky situation. The Justice Dept. has been probing closely into every nook and cranny of the TV industry as a possible preliminary to throwing the antitrust book at the networks.

• **Antitrust Chief**—Just how closely Justice has been looking was made clear by what the department's new antitrust chief, Victor R. Hansen, told the committee recently. After two months in office, Hansen showed he is following the tough antitrust path blazed by his predecessor, Stanley N. Barnes, who is now a federal judge.

Like Barnes, Hansen sees a "striking similarity" between the present TV industry structure and the monopoly pattern built by the big movie producer-distributors, which was condemned under the Sherman Act in the Paramount Pictures case of 1948. The chief purpose of Justice's inquiries in the present case, he says, is to determine "whether, in today's market context, the networks' dual role—program production and distribution coupled with station control—so threatens television competition as to warrant divesture."

Hansen told the committee that if investigations indicate violations of the antitrust laws, Justice is ready to go to court to force the networks to give up ownership or operation of stations, production facilities, or other interests.

• **Music in the Air**—The hearings brought out new charges that may or may not add to the antitrusters' ammunition:

• A group of TV film producers and distributors claimed that the nets dominate the best viewing time over the country's TV stations, cutting down their market for films.

• Witnesses from one area of the popular music field, including songwriter Billy Rose, charged that the nets dominate the nation's music programming through their control of Broadcast Music, Inc., rival to the older American Society of Composers, Authors & Publishers (ASCAP).

• **Election-Year Fuss?**—The networks don't see much in the way of action



FRANK STANTON, president of CBS, was praised by Rep. Celler, committee chairman, for his conciliatory attitude.

coming out of the hearings. They don't like the atmosphere, which puts them publicly on the rack, but they tend to view the hearings as a byproduct of the election year. In a way, they see an implied compliment in the investigation.

"Investigations," says one network executive, "are the price for being successful in TV."

• **Legal Ground**—The nets point to the fact that Hansen himself says his investigations are a year or two away from completion. After that, as one official admitted, there "may be an antitrust suit." But the nets feel they are on firm legal ground.

The network chiefs, as usual, were cooperating with the committee, keeping to themselves any private reservations about the hearings. On his first day before the committee, for instance, Stanton's conciliatory approach won praise from Celler. But the witnesses didn't have a lot new to add to the record. By and large, they merely repeated the explanations of network operations that they had given the Senate Commerce Committee (BW—Jun. 23 '56, p 104).

• **In Earnest**—Hansen's statement left little doubt he is in earnest. He went into detail about Justice investigations. All in all, they include almost every facet of network operations and touch on just about every charge that has been leveled against the nets. Some have been in progress for two years, while others are just getting under full steam. And Hansen had some preliminary observations to give the committee.

One inquiry is a sweeping look at charges that the nets tie in sales of net-

work advertising time to sales of shows they own or control. With the help of the Federal Bureau of Investigation, this includes a search into a wide variety of network practices, such as pricing shows, discounts, production facilities, and long-term talent contracts. The inquiry has even gone outside the TV nets to bring in related businesses, such as advertising agencies and TV program producers and distributors, both of live and film shows.

Hansen told the committee that the inquiry, though not complete, suggests that the big nets "beyond doubt have power to dominate, if not control, major aspects of television." The inquiry will try to determine if that power has been used, or will likely be used, to exclude competition.

• **Programming**—In the matter of program control, the nets contend that they take a large number of programs from outside sources. Stanton, for example, told the committee that of its present schedule, CBS owns 29.6% of the programs, has part interest in 28%, and has no interest in 42.4%. Of evening programs, CBS has no interest in 49.5%, he said.

One network official remarked ruefully it was ironic that the nets are being attacked on the basis of controlling their own programs, since radio and TV have so often been criticized for letting advertisers dominate programming.

• **Sales Methods**—Hansen supplied further evidence of the scope of his inquiries by telling the committee about the recently begun probe into the methods the networks use to sell time to advertisers. Justice wants to find out if present practices, especially the "must buy" system that requires advertisers to take a minimum package of stations, violate antitrust laws.

Hansen assured the committee that Justice is moving "with utmost vigor" in its investigations. But Celler said the Federal Communications Commission could save time by acting on problems. He also expressed hope that the nets would voluntarily change some of their methods.

• **Multiple Station Rule**—In his testimony, Hansen also indicated that the Justice Dept. will set its face like flint against any relaxation of the "multiple-ownership" rule, which limits a single owner to not more than five stations in the Very High Frequency range and two in Ultra High Frequency. Station owners have been pushing FCC to liberalize this rule, but if Justice is prepared to fight any relaxation, the odds are against it. In fact, Hansen suggested, the antitrusters may put pressure of their own on FCC to make the rule even tougher.



BUSTLING 50 years ago with a million immigrants a year, it symbolized our melting pot. Now it's . . .



DESERTED as the trickle of immigration through New York is diverted to downtown Manhattan.



Uncle Sam's Red Brick Elephant



MILE OF WATER separates the island from the tip of Manhattan. Realtors once thought of building a plush housing development.

An elderly white cat, 35 buildings, an organ (out of tune), five turbo generators, and a creaking 900-passenger ferry were up for sale last week under the General Services Administration's offer to auction off Ellis Island (BW-Sep.22 '56,p34). Then the sale was suddenly called off.

After 15-million-plus immigrants had passed through its medical examinations, the New York Harbor island was put on the surplus property list in 1954, when the government transferred its immigrant receiving station to downtown Manhattan. The island's classification as surplus property knelled an end to the era of immigration—an era that reached its peak in 1907, when 1,218,480 foreigners arrived in the country.

• **Tapering Off**—Since the quota system was adopted in the 1920s, and was modified by the more restrictive McCarran-Walter Act of 1952, immigration has decreased enormously. To get on a waiting list, the 150,000 immigrants



in New York Harbor

now allowed by quota must pass stringent medical examinations at American consulates abroad. Only routine inspection is required when they finally arrive.

- **Up for Sale**—GSA put an ad in the newspapers and sent out invitations to bid to 1,500 companies, individuals, and real estate brokers in the area.

When the ad appeared, a couple of dozen companies responded with requests for inspection tours of the island. But a different response came from some New York and New Jersey congressmen whose constituents are sentimental about Ellis Island. They put pressure on the President to maintain the island as public property.

Suggested uses include an immigration museum (another group headed by Pierre S. du Pont, 3rd, and the Steelworkers' Pres. David McDonald is campaigning for \$5-million for an immigration museum at the State of Liberty), a home for the aged or for delinquent children, or a clinic for alcoholics.

New York City officials decided the city can't afford to buy the island, but Mayor Robert Wagner joined the congressmen in urging the federal government to keep it. On Tuesday, Pres. Eisenhower yielded to the pleas. He ordered GSA to postpone its auction plans until Congress has had a chance to review the island's fate.

- **War Between States**—Even if the campaign to keep Ellis Island public is successful, the problem of territorial jurisdiction will still have to be resolved. Both New York State and New Jersey claim the island, and New Jersey once considered building a causeway connecting it with the Jersey City waterfront, 500 feet away. The state has now dropped that idea, but it is still holding onto the territorial claim.

- **Money Needed**—If Congress decides to let the island be sold, GSA will still have a tough job convincing industry that the island is, as advertised, "a perfect location—for oil storage depot, im-



DEBRIS of a house that nobody lives in is Ellis Island's heritage of generations of government service.

port and export processing, warehousing, manufacturing. . . ."

Although the island's 35 buildings are solidly constructed, they are old, and extensive remodeling would be needed to adapt them to industrial use. Unless a causeway was built to the nearby Jersey Central RR dock, all production would have to be shipped by boat, and all personnel would have to be transported back and forth by ferry, at an estimated cost of \$210,000 a year.

- **Needs Some Repairs**—Any industrial purchaser who managed to overcome these obstacles because Ellis Island fits his site requirements, would still face major problems in establishing a plant in New York Harbor.

- The original investment would be high; the entire property is valued at more than \$6-million.

- It would probably cost about \$1-million to transform the current produced by the island's 1,600-kw. generators from d.c. to a.c.

- Although GSA claims that a few thousand dollars will refurbish the island's 50-year-old ferry, another appraiser contends that the ferry is about ready for the scrap heap. A replacement for it would cost another \$1-million.

To these costs must be added an estimated \$800,000 to rehabilitate the buildings themselves.

- **Potential Uses**—The government had pinned some of its hopes for a sale on one of the oil companies that maintain storage facilities on nearby Staten Island and in the Jersey Meadows. Oil tankers could dock at Ellis Island but, considering the large investment the property demands, its 27.5 acres allow small leeway for future expansion of facilities. Most deepwater terminals are five times that size.

- **Cannibalized Island**—Before GSA put the island up for sale, it checked with other government departments to see if any of them could use the property. Although no one took up the offer, the Bureau of Prisons, the Army, and the Coast Guard walked off with a good deal of useful equipment.

But the island's buildings still hide a maze of partially equipped laundries, machine shops, and kitchens; dormitories with endless rows of rusting iron cots; cafeterias, schoolrooms, carpenter shops, and chapels. Perched on one corner and still in good condition are a power house and incinerator, and the greenhouse that once raised flowers to welcome immigrants to the new world.

A Mood of Self-Content

World Bank and International Monetary Fund delegates hold 11th annual session cheered by general prosperity. New private lending outfit is set up.

Delegates to the 11th annual meeting of the International Bank and the International Monetary Fund in Washington this week were in a distinctly celebrating mood.

They had a number of things to celebrate. This year's meeting marked the 10th birthday of the bank—created to provide credit for war-shattered economies—and of the fund, whose task was to provide ways and means of international payments. Because of the double birthday, many sessions were devoted to lauding their records and blueprinting future tasks. In addition, the delegates launched a new affiliate, the International Finance Corp., which is designed to make loans solely to private enterprise.

- **Prosperity**—These doings were not the only reason for the glow of quiet satisfaction that was sensed, particularly in the public meetings. Most of the 60 nations represented at the sessions were enjoying a period of prolonged prosperity—both at home and in foreign trade. In the past year, a majority had continued building up their supplies of gold and dollars. Like the U.S. itself, many were more concerned with combatting inflationary tendencies than deflationary ones (page 96).

The World Bank was given a lot of credit for these developments. Delegate after delegate patted the bank on the back for its 10-year record of 150 loans—involving some \$2.7-billion—without a single default. These loans, it was made clear, had made a substantial contribution to reconstruction.

- **Shift of Stress**—Now, with world production well above its pre-World War II peaks and with trade booming, the emphasis is shifting from reconstruction of industrial countries to the building up of the underdeveloped nations. Eugene Black, the bank's president, pointed to the shift in policy when he announced that 1955 was the first year in which more lending was done in Asia than in any other continent, while the single biggest loan was for Africa.

Even more significant in the new trend is the establishment of the International Finance Corp. This organization, headed by Robert Garner, a former vice-president of General Foods Corp., was created to fill the gap between private investors and such international lending organizations as the World Bank. Set up separately but using many of the bank's facilities, the IFC will invest in productive private

enterprises without any government guarantee.

- **Venture**—In explaining the objectives of the IFC, Garner made it clear that it was a "venture capital" operation. It will not invest in public utilities or in social projects such as schools or housing. Instead, it will concentrate in industrial enterprises in the less developed areas. The aim, Garner said, is "to demonstrate that private investment . . . prudently made and properly managed, can be both profitable and useful."

The IFC, which has already received \$78-million in subscriptions from 32 countries, has not yet made any investments. But Garner announced that it had received a number of requests that merit "serious consideration."

Although there was general acknowledgment of the need to assist the underdeveloped areas, many of the Western representatives feared that the extreme nationalism now rampant in some areas would impair confidence on the part of both private and government investors. This feeling was freely aired in private. In public, most Western delegates limited themselves to discreet warnings like that of Black, who said that "no leader of a developing country can afford to set unrealistic goals and then disrupt the whole economy by trying to achieve them."

- **Quiet on Suez**—There were only veiled references to the seizure of the Suez Canal; Western delegates and those of the underdeveloped countries seemed intent on avoiding any open mention of either Suez or the Aswan Dam project, which the World Bank had planned to support until the U.S. and Great Britain withdrew backing.

In the corridors, however, resentment both over the Egyptian move and the Western position were heard. One of the jokes going the rounds was a definition of "quid-pro-quo" as viewed by an underdeveloped country: "The quid is that if you give us a big loan now, the quo will be that we might consent to accept another loan in five years' time."

For their part, some of the underdeveloped nations complained that the West was moving too slowly—and too modestly—in providing funds.

There were also some protests about the general rise in interest rates on the bank's loans. The bank explained this was due to tightening of credit in all major countries. Black made it clear that any country letting inflation get

NEW YORK

TURN LEFT AND DOWN THE STAIRWAY

the upper hand would find it hard to get loans—the bank feels loans would be wasted unless inflation was curbed.

• **Convertibility**—But these were minor complaints that did not mar the general atmosphere of accomplishment and prosperity. Unlike many previous sessions, there was almost no discussion of when full convertibility of foreign currencies could be expected. Despite some progress during the past year, there was no longer any expectation that formal convertibility of the pound, for example, was in the offing.

Most of the nations obviously recognized that there is a link between increasing world trade and domestic prosperity. And there was a general recognition of the need to exchange ideas and experiences in order to maintain prosperity. Private discussion often centered on monetary controls to keep inflation from getting out of hand. As one delegate said, "This meeting represents a return to a new normalcy. We have reshaped the old tools of monetary policy and world trade to meet new conditions of prosperity."

Housing Credit Ease: Empty Gesture?

Four Administration moves tend to relax terms for mortgage loans. But they don't provide important new money.

The Administration's moves to ease housing credit got their first test this week, and builders are less than jubilant about the way things are going. Four credit-easing orders from the White House seem to have bolstered builders' morale a bit, but not their order books.

Housing has been a conspicuous blot on the 1956 economy. No month has matched last year's annual rate of more than 1.3-million housing starts. The latest figure, for August, was at a rate of 1.1-million for the year, and the industry would settle for that as the year's total.

The homebuilding trade has deplored government restrictions on down payments and mortgage maturities (since liberalized), but it has reserved its choicest epithets for the tight money policies of the Fed.

• **Fringe Benefits**—However, three of the new orders promise in the long run to encourage some additional housing credit—they were designed to jack up housing starts by 100,000 units between now and yearend.

The Federal National Mortgage Assn.—Fannie Mae—will make advance commitments to buy mortgages at a 6% discount instead of 8%. These commitments are made to builders who want to start homes under FHA and VA programs. They amount to a contract by FNMA to buy a mortgage if necessary, at the stipulated 6% discount price, when the house has been sold. For a \$10,000 mortgage, Fannie Mae will agree to pay \$9,400 instead of \$9,200 as before.

The Administration hopes the more generous advance commitment will encourage builders to seek more mortgage loans, but whether or not they can find lenders is another matter. This relief doesn't increase the volume of dollars that banks have available for housing loans.

Fannie Mae is also reducing the

amount of stock a lender must buy in the association when he sells it a mortgage. The 1954 law set a minimum of 3% of the selling price to be invested in FNMA common. This year's law reduced it to 1%, but Congress and the Administration announced the intent to demand 2%. Last week's action cut the requirement back to 1%, which means in effect that a mortgage holder can get 1% more cash when he sells to FNMA.

The last time the stock purchase requirement was eased, Fannie Mae's business boomed, and officials are hopeful for a similar effect this time.

Federal Home Loan Banks will lend savings and loan associations up to 12.5% of their savings deposits, instead of 10%. Money so borrowed from the district banks can be used for mortgage lending, but no rush is expected. Only 450 associations out of 4,400 have borrowed up to the old 10% ceiling.

The Home Loan Bank Board raises its funds from the money market and early this month paid 3.8% on \$197-million worth of notes. At such rates, the price that the associations would in turn have to pay the district banks for borrowing will, officials believe, continue to keep most of them from borrowing to the limit.

• **Down Payments**—The fourth White House order reduced the down-payments on FHA-insured mortgages on houses costing \$9,000 or less, cutting the figure from 7% to 5%. Builders see little relief in a reduction of \$180 or less. "Buyers already have the down-payment," one builder says. "What they want—and can't get—is financing on the mortgage."

Besides, few houses in the under-\$9,000 class are built in the North or East. Nationally, about one out of four houses financed through FHA is in this price bracket, but most of them are in the South and Southwest.

Ford Jumps Gun

... by announcing prices on 1957 models two weeks earlier than usual. They're up an average of about 2.9%.

The Ford Motor Co. upset auto industry tradition last week by announcing its prices on 1957 cars two weeks before they will appear in dealers' showrooms. For some parts of the auto industry it meant bad news.

The announcement of an average retail price increase of "about 2.9%" was made at a press preview, with the Ford Div. seeking to allay rumors that the 1957 cars would carry much heavier price tags than the 1956 models. Informed speculation previously had put the price boost at between 5% and 7% over 1956 prices.

• **Competitive Angle**—A hike of 5% to 7% would have retained a competitive pricing position for higher-cost producers such as Chrysler, American Motors, and Studebaker-Packard. According to division general manager Robert S. McNamara, Ford's boosts are "no more than our actual costs for materials and labor have gone up."

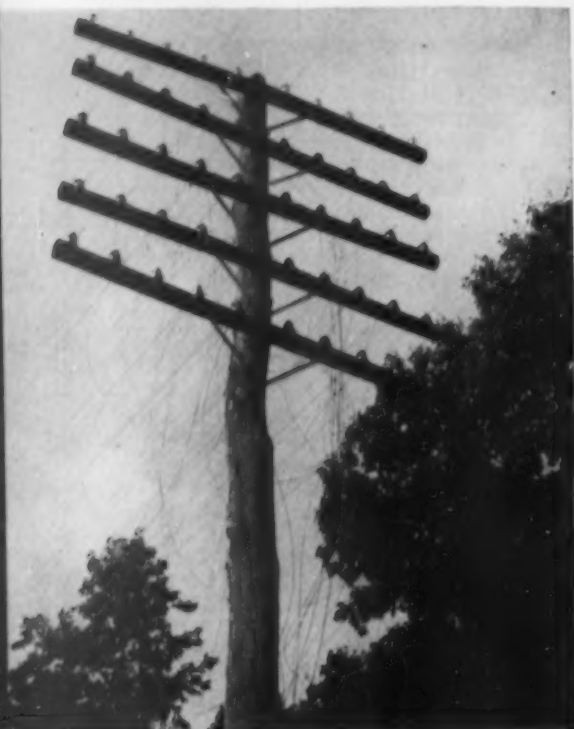
What General Motors will do about prices still is a question. But it's a safe bet that GM can match any price Ford sets. At his own press show last week, Edward N. Cole, Chevrolet general manager, said, "without doubt we are going to raise prices, but not a single person in GM knows how much, including Mr. Curtice."

Ford did not disclose its actual pricing structure, although McNamara did say one model of its big Fairlane series is going up only \$1 and another by about \$70.

• **Early Disclosures**—McNamara also flew in the face of industry tradition by announcing that Ford would have two wheelbases—116 in. and 118 in.—and power ranges up to 245-hp. Such details generally are reserved for the public introduction of the new models. Describing them so far ahead indicates dealers have no "clean-up" problem with '56 cars.

The Ford Div. spent \$209-million to bring out its 1957 cars—the highest expenditure in its history for a new model. And Ford people plainly feel their "new-from-the-ground-up" car gives them an edge in the 1957 sales battle with Chevrolet. But Cole, while conceding the competition would be tougher next year, commented: "You've got to get up off the canvas before you can start swinging." For the first seven months of this year, official registration figures give Chevrolet an edge of more than 150,000 cars over Ford.

Strike violence (right) and vandalism (below) led to blackout of phones in Portsmouth, Ohio, last week. Phone company supervisor took picture at right of pickets preparing to attack phone repair crew.



When Phones Go Out, Climate of

To the merchants, the businessmen, the bankers, and the ordinary people of Portsmouth, Ohio, last week came a 77-hour taste of the dark ages that preceded the advent of Alexander Graham Bell.

Telephone communication between Portsmouth and the outside world ceased; it ceased, too, among all but a score or so of the 50,000 people of Portsmouth. It was no act of God—no hurricane or earthquake was responsible. Instead, the wires went dead at 6:20 p.m. on Sept. 18 when Clare E. Williams, president of Ohio Consolidated Telephone Co., and of a brother company, General Telephone Co. of Ohio, ordered the master switch in Portsmouth's central telephone exchange pulled.

What followed was 77 hours of anger, bewilderment, frustration, and apprehension for the whole of the strongly pro-union city, and particularly for the city's businessmen.

• **Bankers' Jitters**—Business for the city's service outfits—the taxicab companies, beauty parlors, and so on—slipped in-

stantly, and so sharply that they had a three-day unscheduled vacation. Wholesalers wrote no orders except those that their agents could collect by car or on foot.

Bankers got a three-day case of the jitters because they couldn't communicate with branches, correspondent banks, or the Federal Reserve. Management at the city's utility, Ohio Power Co., chewed fingernails vigorously, hoping there would be no transformer blow-up, no fire, no break of live power cables—but never able to tell whether any such accidents had happened.

• **Rare Lesson**—Portsmouth's taste of the dark ages ended at 11:09 p.m. on Sept. 21, when telephone company boss Williams reopened the city's circuits. Meantime, the city had learned, under rare conditions, a lesson that's seldom taught in the U.S., or, for that matter, anywhere else in the world where telephones are in general use. It found, by personal experience, just how much its life and its business are dependent on telephones.

A long, bitter, and violent strike

brought Portsmouth up to this piece of self-discovery.

• **Strike & Violence**—Two months ago, on July 15, the Portsmouth local of the Communications Workers of America struck against Ohio Consolidated Telephone Co. Months of fruitless negotiation had preceded the strike. The union's contract had expired. It had negotiated that contract when Ohio Consolidated was held by Theodore Gary & Co. On Oct. 31 last year, Gary & Co. sold Ohio Consolidated to General Telephone Corp.

The company's new owners demanded a new contract in which the union would give up some of the gains it had made under the old management. The union refused; called the strike even before negotiators had begun to talk about wages. The company brought in supervisors from other Ohio cities to run the exchanges.

Violence began in the first bitter days of the strike. By midday of Sept. 18, the company charged, there had been 112 separate acts of violence against its personnel and its property. On the



Fear Takes Over

roster: supervisory repair crews beaten so badly they had to be hospitalized, bricks hurled through the plateglass windows of its offices, bullets fired at company trucks and repair crews, telephone cables cut innumerable times. Total number of arrests: zero.

Cable cutting became so frequent that repair crews—followed wherever they went by pickets—weren't able to keep up. Circuits quit working so often that one official of Detroit Steel Corp.'s plant moaned: "A couple more weeks of this and I'm going to get the Boy Scouts busy on smoke signals."

• **Last Straw**—On Tuesday morning last week, five supervisors repairing cut cables were manhandled and had to be sent to the hospital.

Williams drove in, fast and angry, from his headquarters at Marion, Ohio. Late in the afternoon, seething over the fact that Portsmouth police had made no arrests, Williams ordered the two exchanges still operating in the city to close down, and all the company's mobile equipment—but for two mobile radio units—to move out of town.

He said, in effect, "We'll stay out until we're assured of police protection."

• **Makeshifts**—From that moment on, the city's businessmen sought frantically to set up makeshift communications systems to substitute for their dead telephones. Calls of only the greatest emergency were accepted by the telephone company's two radio units, one stationed at police headquarters, one at the city's largest hospital.

Detroit Steel Corp. set up an Army field phone system to link plant headquarters to coke plants, blast furnaces, and open hearths. Bankers, at considerable risk, had to hold up papers that normally would have been cleared with a single phone call. Ohio Power Co.'s service department temporarily set up shop at a dozen places around the city, used radio, and newspaper ads to tell customers where they could contact service employees.

Doctors simply had to forget about appointments; they had to make every one of their calls personally.

The Retail Credit Bureau used runners to keep in contact with its 250



EMERGENCY: In phone blackout only highest priority calls were handled by mobile radio.



PARLEY: Angry, anxious men of Portsmouth who met last week to persuade company to open circuits.



RETURN: Phone company's mobile units, ordered out of town for safety, return under police guard.

members. A service that normally would have taken five minutes by telephone took as many hours.

- **New Business**—For downtown restaurants it was a time of boom. Business usually conducted by phone called for face-to-face contact, and the restaurant table was the best place for this. Department stores noted little if any slip in sales, for their radio and newspaper advertising went on just the same.

Western Union felt the upheaval fast and furiously. Wednesday, it handled 75% more messages than usual; on Thursday, 100% more; on Friday, 200% more. Unable to deliver incoming messages by phone, it had to double its staff of delivery boys. It found the cost of delivering so many messages by hand exceeded charges for the messages.

- **Sense of Fear**—Direct financial loss for most of the city's business was small. But in the vacuum of communication, apprehensions mounted, tempers shorted, tensions grew. All this produced a heavy, but undirected, sense of fear.

By Friday noon, the city's business, legal, and industrial leaders had organized. They persuaded a judge of the Court of Common Pleas that the company had to be assured its personnel and property would be protected. The judge had previously shunted to a visiting judge all hearings connected with the strike. That night, they arranged a meeting. Williams came back to the city with his company's lawyer and met with representatives of union, city and county law enforcement agencies, the city administration, and two representatives from the state.

- **Promises**—Law enforcement officers agreed to protect the company and its personnel—in effect, reaffirming their oath of office. The city and county governments' legal staffs, in the absence of City Manager Robert E. Layton, promised to assure that protection. The union's man, CWA national director J. Curtis Fletcher, promised to ask his members to refrain from vandalism. The law enforcement officers signed a statement of their promises and, under the judge's pressure, Williams accepted.

At 11:09 p.m. that night he turned the master switches on again.

- **Threat Remains**—But the battle isn't over; bitterness and tension remain.

On Monday, when City Manager Layton returned from vacation, a shot was fired into his garage, a projectile sent through his front window. Five teams of cable splicers have been repairing cut phone lines, but cable cutters have been out again in the pre-dawn hours and have cut 10 more lines since Friday night. Cables to some 4,000 of the city's 17,000 phones are still broken.

And the strike continues—as bitter as ever, and with the violence it has brewed boiling barely below the surface.

Europe Tries to Free Its Trade

West Europe's Common Market scheme would mean new problems, new promises for U.S. traders. It will come to a critical deadline on Oct. 10.

Economic unification of Western Europe has been a dream in the minds of European statesmen and U.S. foreign policymakers ever since World War II. After 10 years of false starts and disappointed hopes, it now looks as if the dream might come true—that in another decade Western Europe will no longer be divided into tight national compartments, separated by tariff walls.

The turning point may come within a month, or at least before the end of the year. Everything hangs on the British—and London observers now predict that the Eden government will decide to go along with Britain's Continental neighbors in building a free trade area.

- **Promises & Problems**—Such a development would hold out promises—and problems—for U.S. businessmen. If Western Europe were a free trade area, or even a low tariff area, many American exporters would find it harder than ever to sell their wares across the Atlantic. However, U.S. companies with manufacturing plants in Europe would stand to gain with the growth of a European mass market. Despite the fact that it would conflict with our trade principles, Washington would probably give the whole thing an official blessing just because of the continued U.S. interest in European unity.

It is the six Continental nations that built the Coal & Steel Community (West Germany, France, Italy, Belgium, the Netherlands, and Luxembourg) that have brought the economic unity issue to a head again. Sparked from behind the scenes by France's Jean Monnet, founder of the CSC, these countries have been working since the beginning of the year on a scheme for a six-nation customs union, or Common Market.

- **Tariffs, Quotas**—The idea behind the Common Market is that, after a transitional period of 10 or 15 years, members of the union would cancel tariffs and quotas among themselves, but maintain a common tariff against all outsiders.

To get protectionist France into the scheme, the sponsors may offer the French extra time or a "transitional status." Ministers from the six countries will meet in Paris Oct. 10, and if they can agree on how to deal with France's problem, a draft treaty may be ready by the end of the year.

- **Pressure on Britain**—It's the drive behind the Common Market—and London's fear that, if it were established without British participation, Britain

would lose out completely to West Germany in the Continental markets—that has forced the British suddenly to reverse their whole postwar attitude toward European unity.

The Eden government—pushed by Chancellor of the Exchequer Harold Macmillan and the Board of Trade's Pres. Peter Thorneycroft—has agreed officially to consider linking Britain with the Continental economies via a free trade or low tariff zone.

- **Top Layer**—This free trade zone, including the Scandinavian countries as well as Britain, would be superimposed on the six-nation customs union. Nations entering the free trade zone, but staying out of the customs union, would retain their own tariffs on goods from countries that weren't members of either pact.

Britain likes the idea of this extra bit of free play, and that's why it prefers the free trade zone scheme to full participation in the Common Market.

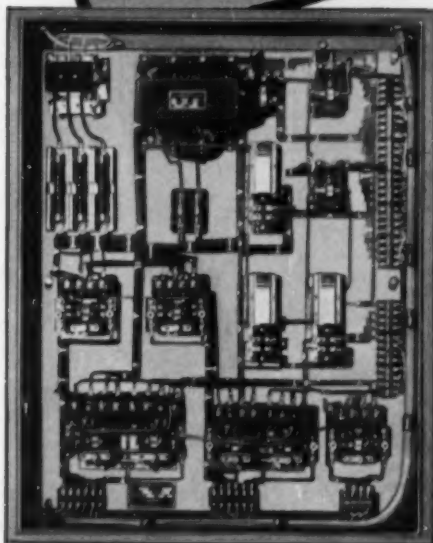
- **Commonwealth Interests**—Whenever such major trade deals are in the air, Britain always has to consider the Commonwealth. And, as London sees it, British membership in a two-layer setup would safeguard the interests of the Commonwealth. The Common Market scheme already excludes farm products, for which most Continental countries as well as Britain have special protection. And it's Britain's preferential treatment of their farm products that chiefly interests Commonwealth countries.

Board of Trade Pres. Thorneycroft went to Ottawa this week to talk things over with the Canadian government, then joined Chancellor Macmillan in Washington at the annual meeting of the World Bank and International Monetary Fund (page 30) to seek the reactions of other Commonwealth ministers to their ideas.

- **Real Aim?**—Though Britain's interest is clear enough, its real intentions are not. Its real aim may even be to limit the whole affair to a low-tariff club, thus keeping the six-nation group from forming a tight customs union.

Whatever the outcome, the British are clearly being drawn into a European movement they have shunned up to now. Back of the new London view is the conviction that Western Europe has a faster growing economy than the scattered Commonwealth—in fact, Western Europe is the most rapidly expanding major market in the world.

FACTORY EQUIPPED with ALLEN-BRADLEY *Motor Control*



Special motor control panel for the Greer Palletizer containing standard Allen-Bradley control units listed in the Allen-Bradley Handy Catalog.

Complex production machinery will only pay dividends on the required investment where continuous production is assured. Reliable control apparatus is an important factor in such production. That's why Greer chose Allen-Bradley motor control for its pallet loader.

The double break, silver alloy contacts on Allen-Bradley control need no maintenance attention of any kind. They are always in top operating condition. And Allen-Bradley's simple solenoid mechanism—with only *one* moving part—is your guarantee of *millions* of trouble free operations.

You can install Allen-Bradley motor control and *forget it!* Try this "quality" control on your tough jobs.

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ALLEN-BRADLEY MOTOR CONTROL



Putting Tranquilizers to the Test

Government project to evaluate the drugs gets under way with a conference of experts, who see the task as a long—five to 10 years—and costly one.

Last week in Washington, the government brought together 700 of the sharpest brains now plying the field of mental illness to help set the direction of a new research task. That job is to pierce through the welter of claims and counterclaims of the effectiveness and dangers in the use of the tranquilizers or "peace-of-mind" drugs.

• **No Quick Answers**—Two days of confused and impassioned discussion confirmed, in spades, the conference sponsors' suspicions that much better research tools than are now available will be needed to come up with valid answers. It is believed it will take another five to 10 years, and many millions of dollars to find the solution.

Comments expressed by the experts attending the session on existing test methods ranged from "not worth the paper they're printed on" to a hopeful note on the strides being made toward more tightly controlled procedures. There was unanimous agreement that the major share of the \$2-million set aside for the research project be devoted to developing better test methods—with additional millions thrown in later.

The difficult research task was placed in the hands of the National Institute of Mental Health, a wing of the U. S. Public Health Service. The last Congress nearly doubled NIMH's budget from \$18-million to \$35-million, and earmarked \$2-million of it for evaluation of tranquilizing drugs. To get itself launched on this job, NIMH—with the National Research Council, the Academy of Sciences, and the American Psychiatric Assn.—brought together last week's gathering of experts from university labs, state mental hospitals and clinics, federal agencies, and the drug industry for a National Conference on Pharmacotherapy in Mental Illness.

• **The Questions**—Ralph W. Gerard, of the University of Michigan, chairman of the two-day parley, defined NIMH's task as finding out:

Do the drugs act? For almost every research group that has claimed positive results in animal or human trials, there's another that has duplicated the test and come up with contrary findings.

How do the drugs act? Right now, there are almost as many answers to this question as there are researchers.

If the drugs are used extensively, what are the likely consequences? This issue has been much discussed by medical societies in recent weeks and

has brought forth an increasing number of widely publicized warnings against promiscuous use of the drugs.

• **Cautious Approach**—There was scarcely a murmur of protest when Dr. Jonathan Cole, who will head the psychopharmacology research center that NIMH is setting up to carry out its task, publicly buried the much-discussed "crash program" approach to determining the drugs' usefulness. He said the "time is not ripe" to undertake a single, large-scale project to evaluate the drugs' effectiveness through a big program utilizing thousands of hospital patients. "Trying to crack the problem by brute financial strength is not the solution," he cautioned.

Cole did recommend that part of the project funds be apportioned for pilot-scale studios looking toward such a massive hospital trial in the future.

• **Manufacturers' Problem**—Representatives of drug manufacturers, who attended as "observers," used their opportunity to appeal to the conference sponsors to establish a set of rules to serve as a guide for the introduction of new tranquilizing drugs.

Underscoring the need for a legally

tenable pre-clinical testing procedure was a report that the manufacturers currently are holding back dozens of new tranquilizers from use for lack of confidence in tests based on animal trials to fend off possible future lawsuits.

The drug companies are worried about the possibility of lawsuits or disastrous publicity if unforeseen harmful effects should arise when the drugs are tried on people. Under the law, the drug company and physician administering a drug can claim immunity if their actions can be shown to meet the test of what a prudent individual or group would have done in the circumstances. Manufacturers can't be sure how that standard will be interpreted. And as of now, they must base their decision about introduction of new drugs on tests for toxicity performed on laboratory animals—tests that they concede are highly unreliable in predicting effects on humans.

• **Possible Help**—The conference generally agreed that pre-clinical animal test procedures were the "weakest link" in the chain of tests from the discovery to therapeutic use of drugs. And NIMH promised to consider calling a conference at some later date to discuss with drug companies needed refinements in these tests and the establishment of some test standard to confer legal protection.



A Portent for the Seaway's Future

This Dutch ship, one of the first ocean-going vessels to dock in the new Calumet Harbor, at Chicago, is a forerunner of what will come when the St. Lawrence Seaway is completed and larger ocean freighters can make the Great Lakes voyage. Before work

started, Lake Calumet—six boat miles inland from Lake Michigan—was a virtual swamp. By next spring, the port will be able to dock eight ocean-going ships at once. Second stage of construction will be finished by 1959, in time for Seaway traffic.



What reducing diet gave The "Keystone" her sleek, slim silhouette?

Railroaders, and rail riders, all over the country have been eyeing the trim, slimmed-down lines of this beauty. And applauding what they saw.

Not a surplus ounce can they find to criticize. Yet she's as husky as a member of an Olympic team, out to win records both for speed and strength.

Teamwork is responsible. The Pennsylvania Railroad engineers co-operated with The Budd Company on the Keystone's tubular design.

And in their plans, they counted on the high strength-weight ratio of nickel-containing stainless steel. And see what happened:

They pared away bulk and weight at every point possible, and provided space for eight additional paying passengers in each of the Keystone's standard-length cars.

These designers, like your own, are super-sensitive to excess costs... initial, operating, and upkeep.

So they saved \$300 per passenger in initial cost. They haven't yet gath-

ered the facts on *operating* costs — the Keystone's too new for that. But she weighs 330,000 pounds less than a conventional train. And as for *up-keep* savings — you know how easy nickel-containing stainless steel is to clean, and keep clean. And how superbly it resists corrosion.

Write for a copy of Inco's "List A" of available publications. It includes a simple form to help you outline your problem. Address your request to International Nickel Company, Inc., 67 Wall St., New York 5, N. Y.



THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street
New York 5, N. Y.

In Business

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Ten Companies Set Up an Outfit To Run Research Reactor

The privately owned reactor for industrial research at Plainsboro, N. J., will be run by a newly formed company, Industrial Reactor Laboratories, Inc., the setting up of which was announced this week by the 10 sponsoring corporations.

President of IRL will be Gen. Walter Bedell Smith, chairman and president of AMF Atomics, Inc., a subsidiary of American Machine & Foundry Co. The vice-president is H. L. Hilyard of the American Tobacco Co. The 10 companies are Atlas Powder, AMF, American Tobacco, Continental Can, Corning Glass, National Distillers, National Lead, RCA, Socony Mobil, and U. S. Rubber.

The Atomic Merchant Ship

The world's first nuclear-powered merchant ship will be a passenger-cargo type, says Louis S. Rothschild, Under-Secy. of Commerce for Transportation. It should be in service by late 1959. The announcement meant that the Maritime Administration had lost its fight to make the ship a tanker. Congress earlier approved \$40-million for an atomic ship without specifying the type.

The ship will have a service speed of 21 knots and will be able to carry 100 passengers and about 12,000 tons of cargo. The reactor will be an advanced version of the one in the submarine Nautilus.

Fuel costs of this and other early atomic merchant ships are expected to be double those for conventional power. But other savings are expected to give the atom ship an edge on net earning power.

• • •

Retail Sales to Keep Climbing Through Mid-1957, Bankers Say

An assortment of indicators this week confirmed that the nation's economic pulse was beating strongly.

The Commerce Dept., surveying the business scene, found the economy operating at a high rate in August and early September. Notably, there was a step-up in activity for industries that had been slowed by the steel strike. . . . As for retail sales, bankers all over the country expect them to keep on rising through the first half of 1957, according to a survey by the Clothing Manufacturers Assn. . . . Makers of machine tools reported August orders of nearly \$87.5-million, a 41% rise over July. Trade sources say the increase was due to buyers getting under the line ahead of announced price increases. For the first eight months, orders totaled nearly \$658-million, up 33% above the 1955 period.

In farming, generally the least cheerful sector of the economy, the Agriculture Dept. predicted that 1956 production might equal the 1955 record. However, prices

were expected to hold level or rise, because of continuing strong markets here and abroad. . . . The department also reported that about 8% fewer pigs would be marketed this year by corn belt farmers. . . . U. S. funds tied up in crop supports were nearly \$8,131-million at the end of July, down seasonally from the previous month but way over the year-before \$7-billion-plus.

• • •

Maze of Federal Scientific Work Charted for the Businessman

Businessmen lost in the maze of the government's hundreds of scientific activities can now provide themselves with a compass.

It's a 349-page directory, compiled by the National Science Foundation and christened "Organization of the Federal Government for Scientific Activities." You can order the book from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. The cost: \$1.75.

It took the foundation two years to compile the book, which is the first of its kind in nine years and by far the most exhaustive ever done. Last year 38 federal departments and agencies had scientific projects.

• • •

Business Briefs

Productivity of basic steel workers has risen since 1947 at an average annual rate of 2.9%, says the Labor Dept.'s Bureau of Labor Statistics. But in individual years, changes have ranged from rises of 11% in 1955 and 9% in 1950 to a drop of 24% in 1954, depending mainly on the volume of output.

Montgomery Ward & Co. this week signed long-term leases for two retail stores, first to be opened since 1942. The stores, built to company specifications, will be in Livonia, a suburb of Detroit, and Gary, Ind. Negotiations are on for a second store site in the Detroit area.

Pittsburgh Consolidation Coal Co. and Standard Oil (Ohio) have joined forces to produce calcined carbon—used in the chemical and metallurgical industries—at a plant to be built at Cresap, W. Va. Raw material for the 165,000-ton-a-year plant will be petroleum coke from Sohio and coke from Pitt-Consol. The venture will be called Mountaineer Carbon Co.

The Internal Revenue Service says cigarette smoking in July topped the 1955 month by 9%, though it lagged behind the June pace. Smokers in July bought 31-billion cigarettes.

Dresser Industries, Inc., of Dallas has bought 40 Russian-made turbodrills. It was a straight cash deal, not a part of the exchange for which Dresser had sought Commerce Dept. permission earlier this year (BW—May 19 '56, p135). Dresser is also expecting a shipment of French turbodrills.

Restrictions on the export of refined copper have been lifted for the fourth quarter by the Commerce Dept. Quotas were also eased on some copper raw materials.



What profits will your business write in this \$3.2 BILLION publishing market?

The great American quest for information, entertainment and education will result in an increase in consumer expenditures for publications of all types from \$2.3 billion last year to an estimated \$3.2 billion in 1965.

The point of this story is clear—increasing opportunity for the publishers of newspapers, magazines, books, maps and sheet music. Makers of newsprint and paper, the printing industry, book

stores and other distributing organizations will profit as well.

Flexible commercial bank credit, such as The Bank of New York provides, is often a prime requirement for profitable operation in this expanding, competitive field.

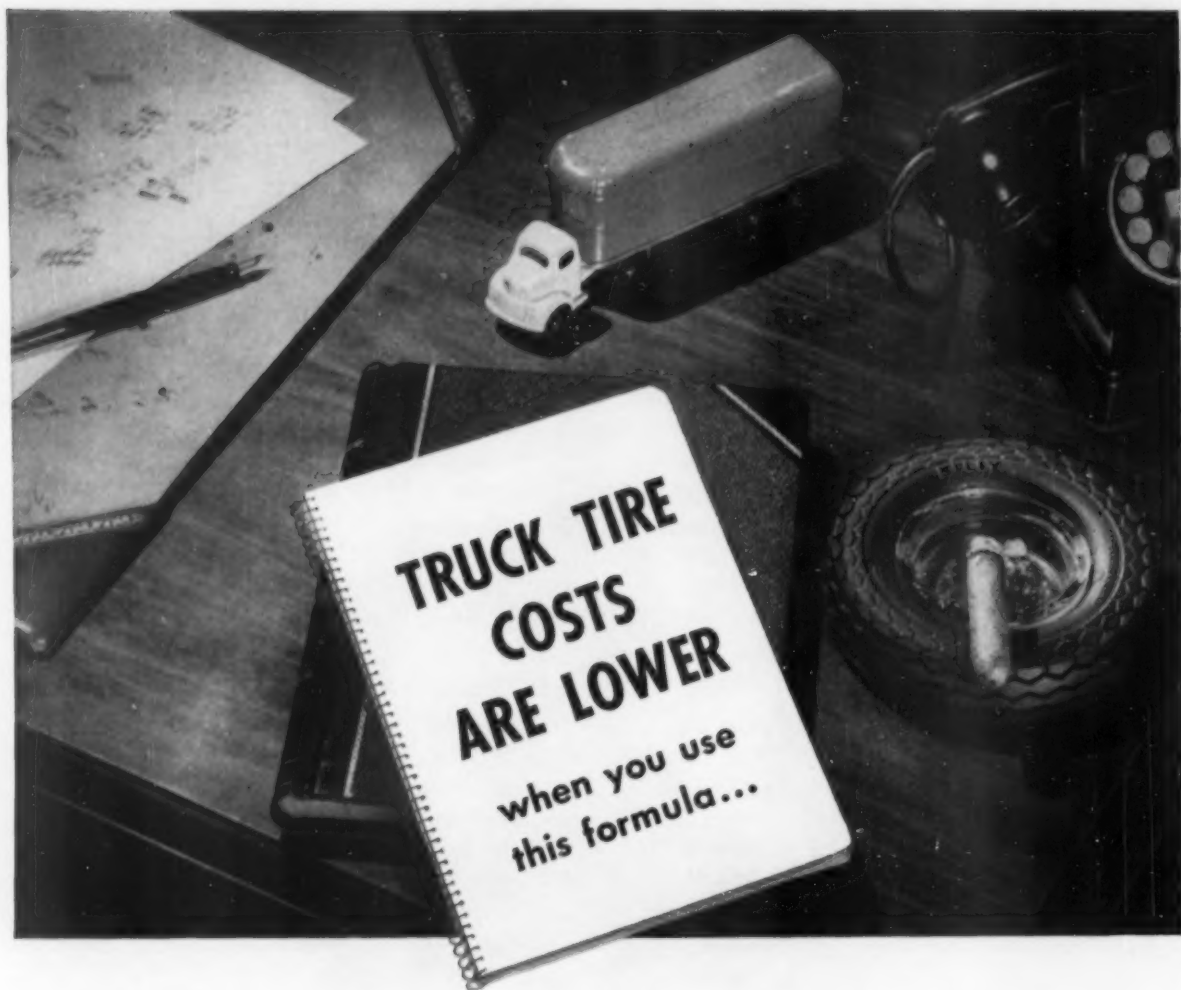
The senior officers of The Bank of New York are readily available to discuss your requirements.

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Consider the final cost-per-mile, not the buying price!

Experienced truck operators know that *mileage per dollar*, rather than original price, is the only true measure of a tire's value.

That's why you will find Kelly Nylon Cord Tires on so many trucks and fleets of trucks. Kellys are quality-built to give the lowest cost-per-mile . . . to last longer on the original tread and to take more recaps.

Kelly Tires have been proved and improved for more than 62 years. Today's Kellys are the finest tires made . . . finest in traditional

Kelly workmanship, finest in quality of materials used. And today, as always, Kelly quality means true economy in the long run.

* * *

It will pay you well to get all the facts—including some remarkable service records—about Kelly Nylon Cord Tires for trucks. See your Kelly Dealer or write direct to: The Kelly-Springfield Tire Company, Cumberland, Maryland.

*It's the Bonus Mileage in Kellys
that makes them the truckers' choice . . .*



WASHINGTON OUTLOOK

WASHINGTON
BUREAU
SEPT. 29, 1956



Living costs as a political issue may be losing appeal.

The prospect now is for a leveling-out of prices, after the sharp summer rises that sent the official government index to a new all-time high.

The trend will be mixed. Consumer hardgoods—things made of metal, such as autos and major household appliances—will show higher price tags. But softness on the farm side as the big harvests come in will tend to limit rises in food costs. And competition will see to it that not all higher costs in other lines are passed on to consumers.

Washington's tight credit policy is involved. It has been a gamble, on both the business and political sides.

Many businesses are being pinched. A few simply can't get the money they feel they need. Others can borrow, but they pay more.

But living costs are rated as the more important, politically. The feeling in Washington is that the Administration has much more to gain by holding the living-cost line, which hits everyone, than it has to lose by tight credit, which hits only the few over the short pull.

—•—
The political situation, with Election Day five weeks away:

Stevenson seems much stronger. You will recall that in 1952 he drew well—brought out big audiences. But the crowds didn't demonstrate much. There was a sort of quiet curiosity. Today they whoop it up.

Eisenhower still seems to have that old appeal. The people turn out when he passes through or stops to speak. His personal popularity hasn't suffered much, if any, by four years in office. He can stir folks up, too.

These are reporters' impressions—impressions of the men who traveled with the same two candidates in 1952.

The big difference the newsmen note is in the reaction to Stevenson. He's getting a better hearing, and this is interpreted as meaning that he's gaining some votes—from farmers and others who said "no" in 1952.

As to final outcome, odds still favor Eisenhower. Nearly everyone agrees on this. If there's any even-money betting, it hasn't been enough to attract attention. But it is a fact that some of those who gave big odds on Eisenhower earlier in the season are doing some hedging. The reasons aren't hard to find, now that both candidates have had a first swing.

—•—
Stevenson will work the bloc appeal even harder in the final weeks.

Note his bid to farmers. He uncorked nothing new. But he did promise a 90%-of-parity support level, the old Democratic stand. As to what the government would do with the surplus production, he was vague. The point he drove home, however, was a commitment to bolster farm prices.

Then there's the appeal to the old folks. What he's promising, with no mention of its costs, is retirement with no cut in living standard. In his mind, of course, was Florida's 10 electoral votes and California's 32. He lost both states in 1952. But the appeal is much broader than that. At about age 50, voters think often of retirement. There are millions of votes above that age.

And there's the attack on big business—the effort to point to favoritism through businessmen in Eisenhower's Cabinet. With this goes the charge

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
SEPT. 29, 1956

that prosperity is for the few, not the many. You will see this repeated time and time again in bids aimed at farmers, workers, and small businessmen.

It's a leaf out of Truman's 1948 book. Stevenson refused to follow it in 1952, when he was on the defensive. But this time he's making use of it. You see conflicts in what he offers. Example: He deplores the rise in living costs that housewives see almost daily in their shopping. But, at the same time, he promises higher prices to farmers, higher wages to workers. The fact that these push up costs and prices is ignored.

—•—

Eisenhower's strategy will shift even more as Nov. 6 nears.

He will do more traveling. The old idea of a limited campaign, built around a few major TV and personal appearances, is all but scrapped. The President will be on the air often, and he will show himself in many more places than were planned originally. It's partly the result of pressure from political advisers. But it's partly Eisenhower himself. He's competitive, and will go all out to avoid a licking.

The White House, too, will pay more attention to voting blocs. You can see the concern in some recent actions.

Easier credit for low-price homes is one move. The recent action to cut down payments on government-insured deals conflicts with the general policy of tight credit as an inflation safeguard (page 31). It was urged more by political than economic advisers.

New rules on loans to small business will make credit easier. The aim here is to help small companies that feel the credit pinch to get money they need. And it will help answer Democratic charges that small business is ignored.

Note Benson's yielding to corn farmers. The Agriculture Secretary agreed rather reluctantly in the summer to permit drought-area farmers to put unpromising corn land in the soil bank. Since then, rains have come to many areas, and a good crop is at hand. Farmers will be allowed to pull corn out of the soil bank if they wish.

But Eisenhower won't try to outbid Stevenson for the farm vote.

Note this week's Peoria speech. The President stood firm behind the policies of Secy. Benson—less than 90% supports, coupled with soil bank and conservation payments to encourage farmers to cut output and in this way cut down price-burdening surplus. And he charged his opponent for the White House with "deceit" in offering higher props.

—•—

Nixon's campaign role shows a big shift. In the past, the VP has been a bare-knuckle fighter, which made him a prime target for the Democrats. They felt they could use him against Eisenhower.

The so-called rough stuff is missing this time. It's a deliberate switch. Another Eisenhower-Nixon win this year would put the young Vice-President in line to make his own try for the White House in 1960. That explains why Nixon talks less about Communists and corruption among the Democrats and more about what another four years of Republican Administration can give the people—two cars, three TVs per family, etc.

Rolling up the Miles



Rolling Down the Costs



Write for your copy of
"STAINLESS STEEL IN
PRODUCT DESIGN"

40 pages of useful engineering and fabricating data, including practical examples showing where, when and how stainless steel improves design, adds benefits, helps sales.

ADDRESS DEPT. W-81

Ask any user: stainless steel trailers *do* roll up extra miles. In fact, they can roll indefinitely because of their great strength and resistance to rust and wear . . . qualities in which *no other metal* matches stainless steel. Of course, that longer operational life means lower over-all expense.

But stainless helps roll down the costs (and UP the profits!) in other ways. It's so strong that thin-wall sections and structural members can be used, permitting greater payload capacity and offering additional savings in operating expenses. Painting isn't

needed, and maintenance is cut to a whisper.

Such properties make stainless steel an ideal material for trailers, trains, planes, etc. They qualify it for myriad other applications, too. Chances are that *you* could use it when your product (or process equipment) requires superior strength, corrosion resistance, heat resistance, sanitary qualities, ease of fabrication, durability and attractiveness. ● We'd be pleased to discuss it with you—anytime you say or anywhere you'd like to meet. *Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa.*

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This mammoth turbine-powered helicopter of "1001" uses is the Vertol YH-16A. The production version will be able to carry up to 12 tons and can whirl into action without warm-up to achieve an air speed of over 150 mph. Transferring the output of its turbine into a smooth, steady flow of propelling power is the job of the forward and aft transmissions produced by SPECO, the Steel Products Engineering Division of Kelsey-Hayes.

The manufacture and assembly of gears and gear assemblies which insure dependable, maintenance-free performance such as required in the Vertol YH-16A is a Speco specialty, one of 40 years standing in service to the aviation industry.



Rotor transmission from YH-16. The transmissions, clutch assemblies, synchronizing shafts and drive shaftings are produced by Kelsey-Hayes in accordance with Vertol's design specifications.

KELSEY-HAYES

Kelsey-Hayes Wheel Co., Detroit 32, Mich. • Major Supplier to the Automotive, Aviation and Agricultural Industries

TEN PLANTS / Detroit and Jackson, Michigan; McKeesport, Pa.; Los Angeles, Calif.; Windsor, Ontario, Canada • Davenport, Iowa (French & Hecht Farm Implement and Wheel Division) • Springfield, Ohio (SPECO Aviation, Electronics and Machine Tool Division)

MARKETING

Measuring the TV Audience

These Rating Services Using These Methods to Measure This Audience Get These Ratings to Give This Top 10 Program Line . . . (August)
A. C. Nielsen Co.	Audimeter (900 machines for national rating) and Recorder-meter plus diary (for local rating)	Total and average audience (national) and total audience (local).	The percentage of all TV homes able to receive the program that watched it for: 1. six minutes or more; 2. during an average minute.	1. \$64,000 Question 2. Ed Sullivan Show 3. All Star Football Game 4. Video Theater 5. \$64,000 Challenge 6. What's My Line 7. Robert Montgomery Presents 8. U. S. Steel Hour 9. Game of the Week 10. Gunsmoke
American Research Bureau, Inc.	Supervised diary (2,200 for national rating, 500 or more for local rating)	Total and average total audience (national and local).	The percentage of all TV homes able to receive the program that watched it for five minutes or more.	1. \$64,000 Question 2. I've Got a Secret 3. Ed Sullivan Show 4. \$64,000 Challenge 5. Video Theater 6. What's My Line 7. Best of Groucho 8. Lawrence Welk 9. Climax 10. Ford Theater
Trendex, Inc.	Telephone interview during program (750 average for ½-hr program)	Average audience (15 cities).	The percentage of all TV homes called found watching the program.	1. \$64,000 Question 2. \$64,000 Challenge 3. Do You Trust Your Wife 4. What's My Line 5. I've Got a Secret 6. Video Theater 7. Ed Sullivan Show 8. U. S. Steel Hour 9. Millionaire 10. Medic
The Pulse, Inc.	Personal interview with program roster to help memory (67,000 minimum per week)	Total audience (national and local).	The percentage of all TV homes able to receive the program that watched it.	1. \$64,000 Question 2. Ed Sullivan Show 3. \$64,000 Challenge 4. What's My Line 5. Medic 6. Alfred Hitchcock 7. Climax 8. The Honeymooners 9. G. E. Theater 10. Video Theater
Videodex, Inc.	Diary panel (9,200 for national rating, 250-600 for local rating).	Total and average total audience (national and local).	The percentage of all TV homes able to receive the program that watched it for eight minutes or more.	1. \$64,000 Question 2. Ed Sullivan Show 3. Dragnet 4. The Honeymooners 5. Climax 6. \$64,000 Challenge 7. Lawrence Welk 8. Phil Silvers Show 9. Best of Groucho 10. Steve Allen

TV's Figures Won't Quite Add

The fall season on television brings the usual flood of new programs aspiring to high audience ratings—whatever those are worth. And you can get all sorts of arguments about what the rat-

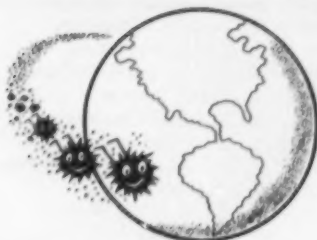
ings are worth, ranging from the general public's feeling that there's a broken heart on TV Row for every spot in So-and-So's Top 10 to the rating services' own view that their much publicized

findings are "guides, not absolutes."

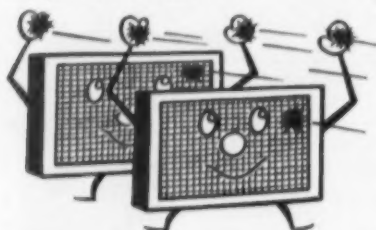
The sponsor and the entertainer look at the array of conflicting ratings (above) and wonder if they measure anything but confusion. The man who watches

AIR-MAZING FACTS

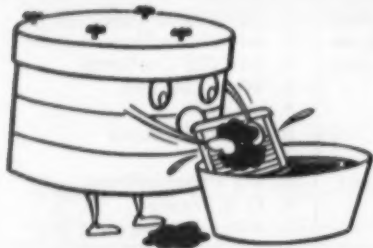
BY O. SOGLOW



GLOBE GIRDLING DUST! How far can dust particles travel? More than a quarter of the way around the earth with only a gentle 10-mile per hour breeze blowing. But stopping the same dust cold and getting rid of it is an easy job for Air-Maze filters.



DOUBLE TROUBLE FOR DUST! A rotating, double barrier of panel filters in the Automaze stops nuisance dust! These panels continuously pass through a cleaning tank where Air-Maze's "pulse-type" action washes out the accumulated dirt—automatically!



FILTER LAUNDERS AIR IN OIL! Dirt-laden air is literally scrubbed clean in a pool of oil by Air-Maze oil bath filters. Abrasive dirt and dust can't get through to damage precision parts in engines, compressors, blowers. Your equipment lasts longer, costs less for upkeep.

IF YOU BUILD OR USE engines, compressors, air-conditioning and ventilating equipment, or any device using air or liquids—the chances are there is an Air-Maze filter engineered to serve you better. Representatives in all principal cities. For condensed product catalog, write Air-Maze Corporation, 25000 Miles Rd., Cleveland 28, Ohio.

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The Filter Engineers

AIR FILTERS • SPARK ARRESTORS • LIQUID FILTERS
SILENCERS • OIL SEPARATORS • GREASE FILTERS

"... the rating companies are doing a big, complex, and highly technical job ..."

TV RATINGS starts on p. 45

television at home wonders why the people he meets daily seem to have been watching old movies or baseball, rather than the duly-crowned favorites. The TV networks make much of the favorable rankings, outwardly ignore the unfavorable ones.

So what does it all mean?

• **Convention Confusion**—A good example of the confusion came up after the national conventions:

• Sindlinger & Co., a Philadelphia research service, issued the first findings, interpreted to mean that the conventions were a flop as TV fare (BW—Sep. 17'56, p27).

• Then Columbia Broadcasting System released a survey by Trendex, Inc., TV rating service in New York, showing that the conventions topped the highest rated July program.

• American Research Bureau, Inc., of Washington tossed out preliminary findings that by the fourth day some 93-million people had seen part of the Democratic convention on TV.

• Last week, A. C. Nielsen Co., big marketing research outfit, reported that about 32-million homes tuned in some part of both conventions, with peaks of 19-million homes for the Republicans and 17-million homes for the Democrats (BW—Sep. 22'56, p36).

• **The Weight It Carries**—Whether or not these findings are reconcilable, whether or not the services agree on who's in the top 10 programs, the fact remains that the people who spend advertising dollars regard them as essential information.

Producers and entertainers—particularly of programs not in the top 10—curse the ratings as, at most, quantitative and no measure of quality or audience response. But the sponsors and the advertising agency time-buyers swear by one or more trusted rating services as guides to their decisions.

"Without the kind of data the rating services provide, we'd be lost," says an official who buys time and plans programs for one of TV's largest advertisers.

"We use ratings morning, noon, and night," echoed a time-buyer for one of the country's biggest advertising agencies.

And a TV network official who was asked about the value of ratings exclaimed defensively: "We aren't totally bereft of our senses—these ratings are essential in making advertising and programming judgments."

It's clear, too, that concern over ratings isn't limited to an effort to break into the top 10 or the top 25 programs. The advertiser in the less spectacular

programs watches the ratings, too, just to be sure he's getting his money's worth. Rating data helps him see if he is getting it.

• **Rebuttal**—James W. Seiler, director of American Research Bureau, concedes that there's confusion about ratings. "But this confusion," he says, "doesn't exist among people in the TV business who actually use them in buying and selling time and programs. These people know what is behind the ratings, how they are arrived at, and how to use them."

Only trained people, Seiler emphasizes, should use and evaluate ratings, which are meant to be "guides, not absolutes." As he expresses it, "ratings narrow the area in which good judgment can operate."

T. R. Shearer, vice president of A. C. Nielsen, recognizes the antipathy that show people have for ratings. "Management," he says, "has learned to use ratings, but show business has a built-in non-acceptance of ratings."

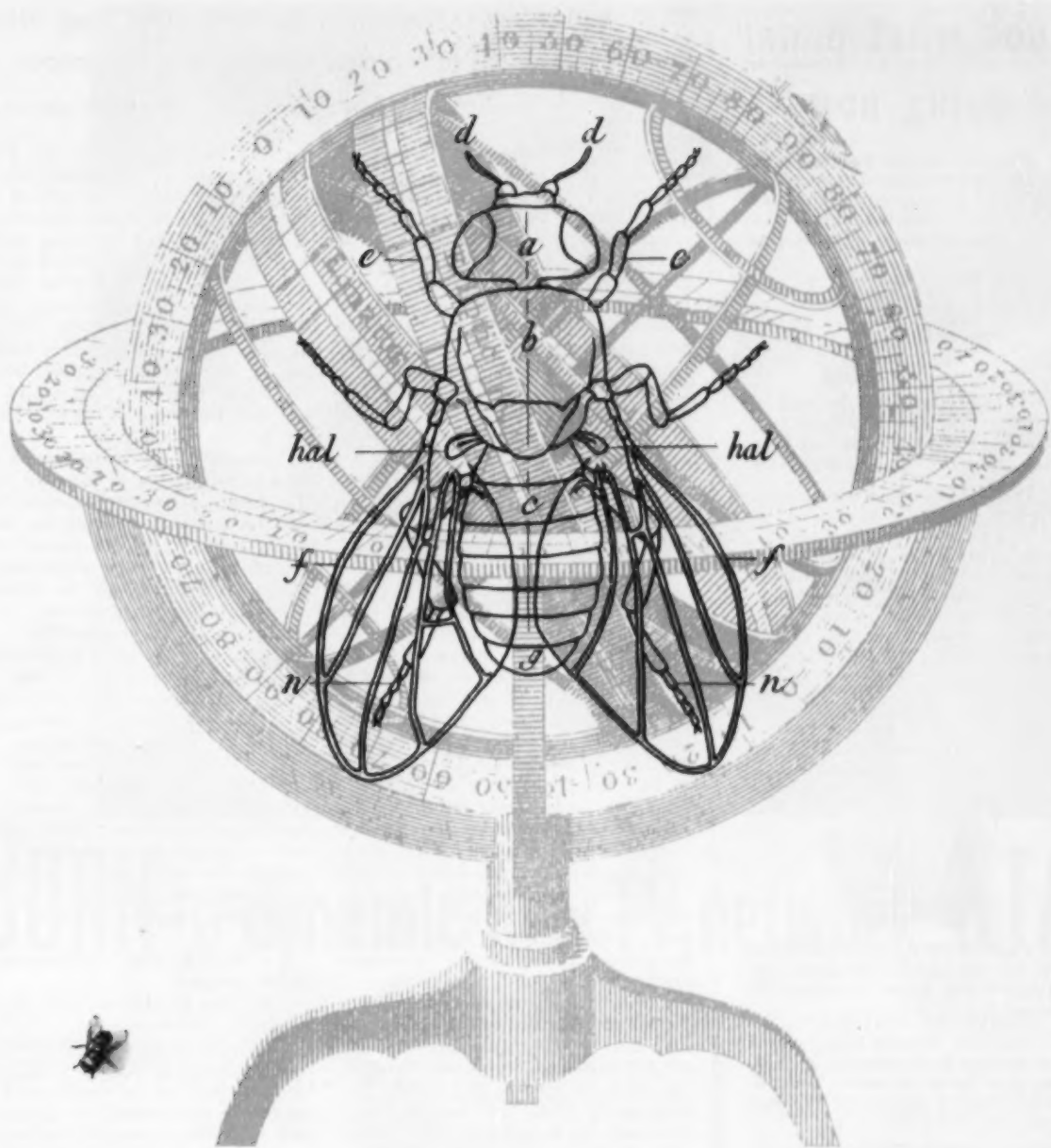
• **The Reason Why**—People in the trade admit that the subject is complicated, that high officials of sponsoring companies generally don't understand it any better than the public at large. They admit, too, that ratings are sometimes misused—by the experts to justify their actions to top management, by stations to mislead the public. But they say that the surface misunderstandings can be explained.

Any explanation starts with the statement that the rating companies are doing a big, complex, and highly technical job. It adds that these services use various methods, measure various things, and express their findings in various terms. Finally, it points out that rating companies work within limitations both theoretical and practical: their techniques, size of sample, method of analysis, etc.

A network or a program producer will publicize a rating that makes a show look good, without explanation of what the rating means. But published ratings often aren't really comparable.

• **Different Bases**—A rating shows the size of a program's audience, expressed as a percentage of a larger group. As the fourth column of the table on page 45 shows, the larger group may be (1) all the TV homes in areas where the program is being broadcast, (2) all the homes that the interviewers call while the program is on the air.

Any of these bases may be valid enough, provided the user knows what the rating means. The error is in trying to compare them. Trendex, for ex-



Two-Hundred-Million-Year-Old Inertial Navigator

OUR INTEREST in the fly's anatomy is the interest of an electronics scientist concerned with the myriad problems in the newest concept of automatic airborne guidance systems: inertial guidance. The fly, eons ago, had two sets of wings. His second set shrivelled into vibrating gyros called halteres, creating his own built-in navigational system, effi-

cient enough for his needs and marvelously compact... in truth, an inertial guidance system. Inertial guidance is one of several major electronic fields where Litton Industries developments have been unique. We work in an environment equipped solely to advance electronics research, design, and production for Defense and for industry.

LITTON INDUSTRIES BEVERLY HILLS, CALIFORNIA
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DIGITAL COMPUTERS AND CONTROLS
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AUTOMATIC DATA PROCESSING SYSTEMS

INERTIAL GUIDANCE
SERVOMECHANISMS

PRECISION COMPONENTS
SPACE SIMULATION RESEARCH

Look what paper is doing now:

*** New idea in unit packaging:** By pairing two standard cartons in one overwrap, Nabisco introduces a new large-size Lorna Doone package that's easy to handle, keeps cookies



crisp longer, and eliminates need for extra machinery. To protect freshness, the individual boxes are lined with a special Riegel waxed glassine.

*** The hunting season is now open,** but few of today's nimrods will remember when all shotgun shells were made of brass. Expensive, they were saved and reloaded. The advent of Riegel's "Shot Shell" paper changed all this and helped create a mass market for guns, hunting apparel and the like.

*** Wanted:** Toys that won't break. That's not too big an order for paper. Riegel developed a paper for the bellows of toy accordions that would take thousands of squeezes without breaking. More recently we worked



up a special strong, laminated glassine for the popular Jet-Zoom toy. Riegel is the leader in papers designed to take a beating.

*** Over 600 different Riegel papers** are now made for printing, packaging and industrial uses. Write to Riegel Paper Corporation, P.O. Box 250, New York 16, N. Y.

Now...what can
Riegel do for
you?

Riegel
TECHNICAL PAPERS
FOR INDUSTRY

"... audience measurement services offer their clients far more than the rating that turns up in a newspaper..."

TV RATINGS starts on p. 45

ample, measures audiences in only 15 large metropolitan areas where all three networks compete; Nielsen and ARB, on the other hand, take a national sample and project it on the basis of all TV homes in areas where the program is shown. Trendex measures relative popularity where programs compete directly; Nielsen and ARB estimate national audiences, including those in one-channel and two-channel cities.

Even so, a Nielsen figure isn't necessarily comparable with an ARB figure for a program's audience. ARB measures total audience—all the people who saw five or more minutes of the program. Nielsen also measures total audience, but it uses a six-minute minimum and it measures the average audience, too.

"Average" audience—the group watching the program at any single minute—may be quite a different measure, especially in a long program such as a convention or a 90-minute spectacular, where people tune in and out. A lot of people might see some part of the program although not many might be watching at any one time.

• The Sample—Among the physical limitations upon rating services is the impossibility of checking a very large sample very often. Some services check their samples in certain weeks of each month; they may happen to encounter the effects of local weather or big competing public events at those times, or fluctuations in the number of stations carrying a show.

Even if two rating companies measure substantially the same audience, results can be quite different. For one thing, samples are tiny, compared with the estimated total of 36.5-million TV homes in the U.S. In blowing the sample results up to national scale, minuscule errors are magnified. Sampling technique simply isn't precise enough to produce anything but approximations in such a large total.

• Ways of Sampling—Nielsen, for example, bases its national ratings on Audimeters placed in 900 homes. An Audimeter is an electronic device attached to the TV set to keep a record, on tape, of when the set is turned on or off and what channel it is tuned to.

ARB provides up to 2,200 families with diaries for keeping a record of a week's viewing. Videodex, Inc., uses a variant of the diary method. And Pulse, Inc., sends interviewers to its sampling of homes, jogs the families' memories with a program roster to obtain a record of viewing habits.

There's something to be said for each

method. A couple of years ago, a committee report of the Advertising Research Foundation found good in all of them but seemed to lean somewhat toward the electronic recording method.

• Real Values—Agency people say they—and the sponsors' executives who are in charge of TV advertising—understand the statistics of ratings. The public, they say, is led to believe that ratings make or break programs, but the executives involved most closely are primarily interested in the facts behind the ratings.

Audience measurement services offer their clients far more than the rating that turns up in a newspaper or magazine. A typical analysis of the ratings also yields a tremendous amount of information on the composition and economic status of the audience, on trends in programming, on advertising costs.

For example, each subscriber to the Nielsen service receives a twice-monthly report on national programs that tells:

• The total number of U.S. homes with TV sets turned on during each quarter-hour of the broadcast day.

• How many TV homes could possibly receive each program.

• The total and the average audience for each program, both in numbers and in percentages, and the share of audience for each program (number of homes watching a program expressed as a percentage of sets in operation at that time).

• Week-by-week breakdowns for certain programs.

• Other tabulations, such as information on sponsorship.

To special subscribers, Nielsen sends a more complete report on about 20 kinds of program information, including cost of commercials per minute for each 1,000 homes reached, the minute-by-minute audience, the ebb and flow of audiences during programs. Nielsen also surveys and reports on about 30 local markets, aside from its national service.

ARB's national report, issued monthly, also gives figures on audience size, and it breaks them down according to age and sex. It deals only with the total audience—no figures on average audience or on minute-by-minute operation of TV receivers. ARB offers an extensive local market service that covers about 120 areas.

The Pulse, Inc., and Videodex, Inc., two New York TV rating services, similarly develop marketing information for stations and advertisers. Pulse claims special strength in its local market research. **END**



BORN—a dynamic new TV network—NTA

The above picture, taken shortly after the actual birth of a baby, announces a mighty exciting and important event.

It's the birth of a healthy, sound, spirited new television network—the NTA Film Network.

As with most parents, it represents the fulfillment of a long-cherished dream. But unlike most new arrivals, this one already has an objective in life. In fact, it has two:

*To provide better entertainment for the public...
and to offer a significant new marketplace for the advertiser.*

Actually, its whole reason for being is a happy marriage between the two! You'll be hearing a good deal more about the NTA Film Network from now on. But meanwhile, wouldn't you agree that...

When the public gains...and the advertiser gains...and the station gains...the birth of the NTA Film Network is a decidedly blessed event for everyone?

4 good reasons for the 4 dimension network

- ① **102 Stations Covering 82% of U.S. TV Homes.** They offer access to the nation's top markets...where 38,173,100 families live...in 28,143,500 TV homes...with about *21½ billion dollars* in buying power. To say the least...it's a vast market...with vast sales opportunities for the national advertiser.
- ② **At a Fantastically Low Cost Per Thousand.** To those appalled by the high cost of TV advertising, the NTA Film Network is the answer. It offers enormous audiences at a remarkably low cost per thousand. Thanks to top talent at a fraction of the cost of the average TV show. Thanks to no staggering coaxial cable costs.
- ③ **With the Greatest Flexibility in TV Network History.** No costly "must-buys". Now you can buy what you want...when you want...where you want it. One contract covers everything—time and program...with no worry about time differentials. You get the prestige of network plus the flexibility of spot purchase.
- ④ **And Guaranteed Clearance of Time and Programming.** No waits...no debates about station clearances. You can get the availabilities you want and need now...without standing in line. Whatever your present TV situation...look to the NTA Film Network—The Four Dimension TV Network!

For the full story, call, wire or write:



a subsidiary of National Telefilm Associates, Inc.
60 West 55th Street, New York, N. Y. • Phone: PLaza 7-2100

NEW ROBBINS **"SERIES 254U" RE-RATED** **FIVE BIG**



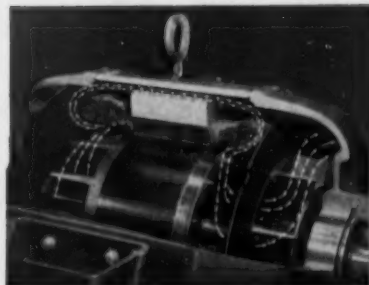
FULL HEIGHT END HEAD PROTECTION

One piece shrouded end heads give full height protection against moisture and falling objects. Internal baffles complete splash-proof construction.

& MYERS

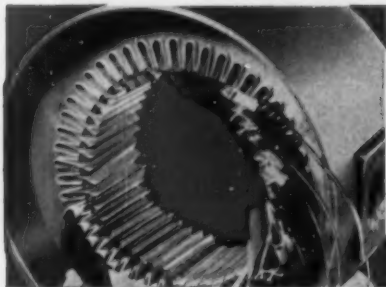
MOTORS offer you...

ADVANTAGES!



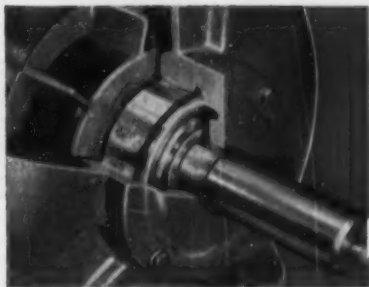
"STRAIGHT THROUGH" DUAL-SEEK VENTILATION ELIMINATES "HOT SPOTS"

Tandem fans, one pushing and the other pulling, produce washing action around and over field coil ends, insure lower internal temperatures and longer dependable operation.



MYLAR® INSULATION INCREASES MOTOR LIFE. Mylar®, laminated to rag paper insures positive insulation and assures virtually permanent protection because of its excellent dielectric qualities. In addition, the rag paper backing provides a cushioning effect for added resistance to abrasions and punctures.

*DuPont registered trademark.



BEARINGS EASILY INSPECTED

Removable cover plate at each end of head permits easy bearing inspection without dismantling motor. Bearings run in double-width races, thus have extra-large reservoirs containing grease selected to resist dust, temperature, humidity and high operating speeds.



PERMANENTLY NUMBERED LEADS SIMPLIFY INSTALLATION AND MAINTENANCE

Proper lead identification is assured even after years of exposure. Numbers are permanently impregnated into the sub-surface of the insulation... can't wear off or deteriorate.

THESE five big advantages make R&M's "Series 254U" re-rated motors your best buy for applications requiring dependable, full-time performance. They can be installed in any environment, outdoors without a cover or in damp and corrosive atmospheres. Moisture, rust or corrosion can't affect their operation, and they take rugged duty in stride! Every R&M motor is electrically and mechanically designed to withstand the most severe operating conditions. Careful quality control and precision manufacture insure top performance and dependability year after year. Write today, for R&M Bulletin 520 BZ on R&M's "Series 254U" re-rated motors!



ROBBINS & MYERS, INC.

SPRINGFIELD, OHIO

BRANTFORD, ONTARIO



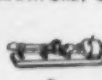
Motors



Fans



Hoists



Moyno® Pumps



Propeller (Industrial) Fans



Many Users Say This Belt Outlasts Them All

The Ray-Man Conveyor Belt features a new and different construction of covers and strength member to resist cuts, tears and abrasion to a degree never before attained. R/M's exclusive "XDC" Cover provides a degree of protection and long life not possible with any other belt. Inside this cover, Ray-Man Conveyor Belt combines elastic cushioned strength member plies in an envelope of strong, yet flexible synthetic fabric to resist gouging and tearing ... to take the impact of large, abrasive lumps ... to permit the belt to trough easily and train naturally.

Like all Manhattan heavy duty conveyor belts, Ray-Man is moisture resistant and mildew-proof. It requires no breaker strip and holds fasteners considerably better than other types of belts. Let an R/M representative show you the advantages of Ray-Man as well as other R/M conveyor belts, including Homocord, with its extra cushion for unusually abusive shock loading. He'll help you select the belt best suited for your job ... one designed to give you "More Use per Dollar." Write for Bulletins 6906 and 6915.

RM 600 AB



MANHATTAN RUBBER DIVISION — PASSAIC, NEW JERSEY
RAYBESTOS-MANHATTAN, INC.



Flat Belts



V-Belts



Conveyor Belt



Hose



Roll Covering



Tank Lining



Abrasive Wheels

Other R/M products include: Industrial Rubber • Fan Belts • Radiator Hose • Brake Linings • Brake Blocks • Clutch Facings • Asbestos Textiles • Packings • Engineered Plastic, and Sintered Metal Products • Laundry Pads and Covers • Bowling Balls

Canadian Consumer Has Big Voice

THE MONTREAL housewife and civic leader at the right, Mme. Renee Vautelet, is making her last public appearance as president of the Canadian Assn. of Consumers—an organization of some 20,000 members that today wields an influence over Canadian businessmen out of all proportion to its size, age, and amateurish complexion.

Next week Mme. Vautelet announces her resignation—to heed her doctor's advice for a six months' rest—at the organization's 10th annual meeting of some 100 delegates in Montreal. It comes at a time when CAC has reached the high point in its nine-year postwar role as spokesman for the housewife, whom Madame Vautelet likes to call the "chief purchasing agent of the country."

There is nothing quite like this "voice of the consumer" in Canada that, one way or another, has poked its nose into the affairs of almost every business group in the country.

• **Broadcasting Dispute**—As her final act for the CAC, for instance, Mme. Vautelet last week threw the weight of her organization's female opinion into the fracas between public and private broadcasting in Canada. She testified before the Royal Commission on Broadcasting (picture), which is investigating the relationships between the government controlled Canadian Broadcasting Corp. and private radio and television stations.

In a brief—described by the commission's head, Robert M. Fowler, as one of the "more important" documents—CAC gave its moral support to CBC and the way it has exercised its powerful authority over all Canadian broadcasting.

• **Hitting the Consumer Angle**—Typically, the main burden of Mme. Vautelet's testimony was not the hassle between CBC and private stations, but how the consumer fares from broadcasting generally. Before the Fowler Commission, she:

• Lashed out against advertisers who use "children's vulnerability" as a promotional weapon and the increasing "exploitation" of children's toys and premiums to inveigle parents into buying certain products.

• Launched a campaign for female representation on the board of governors of CBC because her consumer group thinks radio and TV influence the buying habits of the nation—and women make 80% of all purchases.

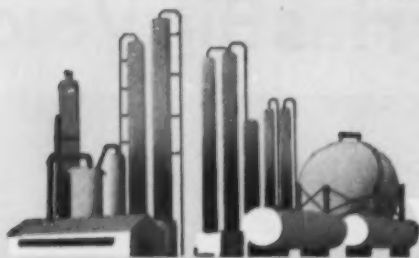
• Demanded far more consumer information on regular daytime programs. CAC wants (1) a consumers



"VOICE OF THE CONSUMER"—in person of Mme. Renee Vautelet, head of Canadian Assn. of Consumers—is heard by Royal Commission investigating broadcasting in Canada.



MME. VAUTELET complained to the commissioners about some types of advertising and called for more consumer information to be presented on daytime programs.



DE LAVAL COMPRESSORS

**for every
refinery
process**

Centrifugal pumps
Barrel type
boiler feed pumps
Centrifugal pipeline
compressors
Ship propulsion
units and marine
auxiliaries

Centrifugal blowers
and compressors

Steam turbines
Turbine generators
IMO rotary pumps
Worm gearing
Diesel engine
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De Laval centrifugal recycle barrel type gas compressor
on stream in a Western refinery.

Whether you need to handle light or heavy gases at high or low pressures in catalytic cracking, reforming, alkylation, coking or any similar service, it pays to look to De Laval. Rugged De Laval centrifugal compressors perform dependably in heavy-duty continuous operation. De Laval has more than 40 years of experience in solving gas compression problems.

If you would like a behind-the-scenes look at De Laval—research, engineering, facilities and products—write for your copy of the De Laval Company Brochure.



DE LAVAL Steam Turbine Company

895 Nottingham Way, Trenton 2, New Jersey

DL 984



MME. VAUTELET and an aide chat with Robert Fowler, chmn. of Radio-TV inquiry.

forum type of program, (2) daytime TV shows to educate consumers about industrial design and (3) information programs that present simple facts on "national economics."

It is not likely that the commission members who heard Mme. Vautelet—or the business community that read her testimony in the press—will blithely ignore CAC's admonitions.

Since the organization was formed in 1947, it has racked up an impressive record of achievements. All of them, says Mme. Vautelet, were aimed at "striving to make business and industry see the consumer as someone indispensable to their operations—not someone to be exploited through impulse-buying and other devices."

• **Wide Support**—To some businessmen this may have sounded like the rantings of some left-wing fringe group. Indeed, there was a time early in CAC's history when Canadian businessmen either ignored or were riled by what appeared to be the gadfly campaigning of the CAC. But today CAC can brag about its files of testimonials from manufacturers, merchants, and government officials praising its efforts.

CAC has helped merchants attract new business to their communities by pointing out in big newspaper ads that their prices compare well with other shopping areas. It has won the support of trade organizations such as the Canadian Playthings Manufacturers, Inc., when it backed their campaign to have imported toys stamped clearly with the name of the exporting country.

What's more, today it enjoys the unique position for such a group of being partly subsidized—but without control—by the government. The Canadian government puts \$10,000 a

Pennsylvania Industrial Development Authority announces



100% financing for your new plant

through Pennsylvania's Community-State Building Programs

A message to Manufacturers seeking a New Plant Site

New 25-year, 2% interest Second Mortgage Loans by the Pennsylvania Industrial Development Authority offer unique assistance to community industrial programs... help "close the financing gap" to assure low cost 100% financing of your new plant building in Pennsylvania.

Added to commercial First Mortgages, plus funds supplied by local communities — these new loans can reduce demands on your working capital for a new industrial structure.

Over 70 Pennsylvania communities now have fund raising experience in organizing and capitalizing industrial developments. Several plant shells now stand ready for completion.

As a businessman, you work directly with these communities and private lending agencies.

You specify plant construction details. You have the choice of purchase, lease-purchase or straight leasing arrangements on highly attractive terms. You select the type of community that best suits your location requirements.

**110 community-sponsored industrial plants constructed in Pennsylvania since 1945 — a nation-wide record.*

100% FINANCING AT A GLANCE

How P.I.D.A. 2nd Mortgage Funds "close the financing gap"... encourage sound investment by private capital:

Industrial Plant Construction Costs —

Subscribed by local non-profit community-sponsored builder-owner corporations. 20%

2nd Mortgage Loan, Pennsylvania Industrial Development Authority. 30%

1st Mortgage Loan obtained from banks, insurance companies and similar lending institutions. 50%

Total financing, secured through local subscriptions and mortgage loans, without cash investment by the manufacturer. 100%

MORE DATA ON P.I.D.A. 2ND MORTGAGE LOANS

Minimum interest rate, 2% per annum.

Maximum term, 25 years.

Available on up to 30% of industrial plant construction costs.

Made to non-profit community corporations organized to encourage local industrial development. The Authority does not engage in direct construction or ownership.

Limited to Labor-Surplus Areas... assuring a plentiful supply of skilled labor and low labor costs... from stable, productive, permanently-rooted small town people.

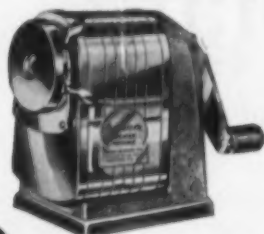
For more details, write or call: Pennsylvania Department of Commerce
Pennsylvania Industrial Development Authority
Main Capitol Building
Harrisburg 9, Pennsylvania
Phone: CEdar 4-2912

□ "Plant" your business in Pennsylvania and prosper! □



A point to remember

Apsco's quality line of pencil sharpeners includes the smartly attractive and enduringly efficient Premier Portable, a complement to the finer desk-top!



America's choice!

Apsco products inc.

Los Angeles, California
Rockford, Illinois • Toronto, Canada

from

OFFICE MANAGER to GENERAL MANAGER

yes, that is the calibre of the personnel available to your organization through BUSINESS WEEK's classified advertising section

clues

year into CAC's pin-money budget of \$30,000. The other \$20,000 comes from \$1-a-year membership fees.

• **Wartime Offshoot**—This government support comes naturally. The CAC is an offshoot of a government agency, the Consumer Branch of the Wartime Prices & Trade Board, set up to enlist the help of consumers in the production emergency of World War II. National women's clubs and local groups played a big part of organizing the wartime agency, and still have indirect association with the peacetime CAC.

"The war over," says Mme. Vautelet, who served on the War Savings National Committee in Ottawa, "here was this unpaid corps of housewives with a big job still to be done. Letters streamed in from all over Canada, asking: 'Can't we have something like this of our own in peacetime?' The housewives were facing the prospect of post-war inflation. So, the National Council of Women called together 56 women's groups. From this meeting in September, 1947, CAC was born."

• **Structure**—Today there are 10 provincial organizations and about 80 local branches. A national office is maintained in Ottawa, staffed with 24 salaried employees (one woman works part-time). Apart from the executive secretary, all top officers are unsalaried—in fact, Mme. Vautelet this year is \$1,500 out-of-pocket for expenses.

But paid or not, the CAC gets its work done. The big job is the presidency, which in her three years Mme. Vautelet has used as a platform to tour the country making speeches. This year she has delivered 246 speeches—a schedule "as I have rather acidly pointed out to the Prime Minister, that is heavier than Mr. Louis St. Laurent himself would take on—even in an election year."

• **Unique Position**—CAC insists that as an organization representing consumers, it is unique. There are others CAC knows about, but they are subsidized by industry, something that CAC has scrupulously avoided. CAC gets letters from all over the world, especially from U. S. women. But Madame Vautelet has turned down offers to speak in this country and points out that women's clubs here could have their own organization.

Actually, there is some similarity between CAC and the Consumers Union of U. S., Inc. But Consumers Union was a depression-born group that developed chiefly into a product-testing and publishing venture.

Part of the influence that CAC enjoys stems from the fact that a left-wing label never stuck. For one thing, it has picked leaders like Mme. Vautelet. She is of conservative background—the wife of a Montreal insurance broker, daugh-

ter of the late Aime Geoffrion, a prominent French-Canadian lawyer, and the great granddaughter of Sir A. A. Dorion, a founder of the Liberal Party.

• **Battles With Business**—Nevertheless, the dedication CAC has toward what it considers the welfare of the consumer naturally leads it into battles with some business groups.

The two big battles CAC won—giving it the prominence it now holds—pitted it against powerful business interests.

• **Cause Celebre**—On June 30, 1955, CAC won a seven-year fight—a sort of cause celebre—against the practice of packaging bacon in red-striped cellophane that appeared to distort the lean-fat picture of the product. Last year the Food & Drug Act made it an offense to use red lines. By that time, though, the meat-packers had long since dropped any real opposition—they just wanted to be sure everyone quit using the red stripe at once.

• **Fair Trade Fight**—Before the battle of the bacon, CAC had already won its spurs as a consumer spokesman on the fair trade issue. On that, Mme. Vautelet and the CAC are adamant. They want no part of any kind of retail price maintenance.

Looking back, Mme. Vautelet is proudest of the CAC fair trade brief "written and presented by two frightened women back in 1950 that won a major victory against what was probably the most organized lobbying effort in Canadian history." The brief minced no words:

"The individual merchant is deprived of the right to decide his own prices. He is converted, whether he likes it or not, from purchasing agent of the consumer into the selling agent of the manufacturer."

Two years ago, Madame Vautelet helped stave off another price regulation attempt through legislation that would crack down hard on loss-leaders. At an inquiry, she used the U. S. to back up her argument:

"The present law in the United States is not protecting trade—this is openly admitted—it is merely mulcting consumers, and manufacturers are driven to avoid its penalties by trading with discount houses behind their own retailers' backs."

• **Broad Role**—Strongly oriented toward the consumer as these two campaigns were, Madame Vautelet says the CAC doesn't consider itself just another special interest organization. And it is the breadth of its role that has brought it stature among businessmen.

This year, for instance, CAC has taken up the cudgels for the Primary Textile Bureau of Canada. That group has been smoldering over imported U. S. bedsheets that show the "torn" or unhemmed length without labeling it as such. This is a deception, the



Ever see an egg-shaped golf ball?

Chances are, you never will, but golf balls are actually egg-shaped as they rocket away at 110 mph, momentarily compressed by the terrific impact of the club.

Resisting this impact is a Glidden baked enamel that keeps the ball bright and new-looking . . . withstands repeated stretching and compression . . . constant scuffing and abrasion . . . scrubbing in strong alkaline solutions.

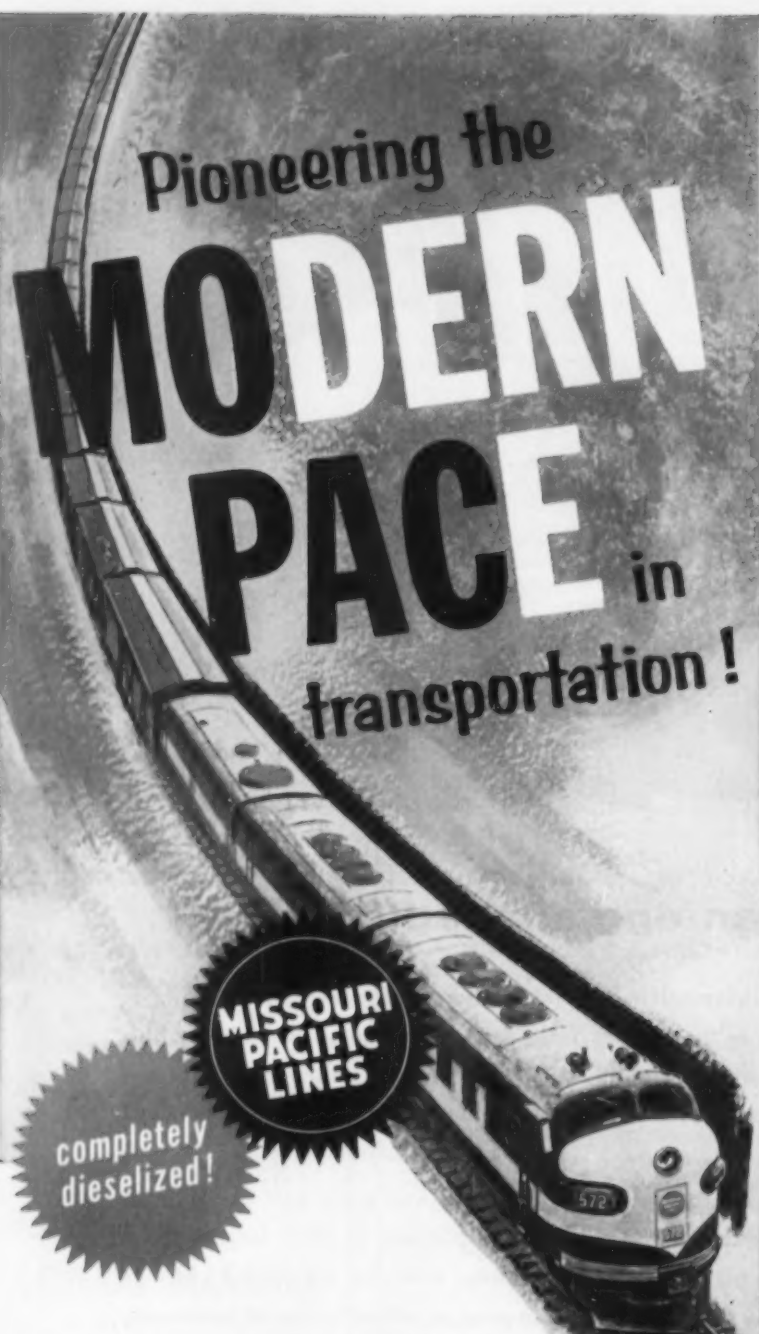
Developed after extensive testing in the laboratory and on the fairway, this superior Glidden white enamel, applied in a four-coat spray system, is standard with leading manufacturers.

Whether you make golf balls, furniture, appliances or other large-volume products, Glidden industrial coatings can produce better finishes at lower cost. Write for complete information.



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Industrial Finishes for Every Product

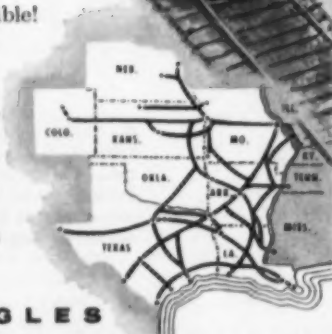


completely
dieselized!

We've added 1,267,360 horses to our stable! In the terms of trains, this adds up to Mo-Pac's 862 diesel locomotive units (783 have been purchased in the past ten years).

Whether it's heading up a 100 car freight or easing our famed EAGLE fleet into mile-a-minute motion... our powerful new diesels are the race horses and work horses of America's future.

ROUTE OF THE EAGLES



"... 'I'll never forget the design show where I had to be pried off a chair'..."

STORY starts on p. 53

Canadian manufacturers say, because Canadian practice is to show "finished length." They called in CAC, which endorsed their view—and will take on the campaign if retailers in Canada don't initiate some action of their own.

Beyond that, the CAC in the last few years has played another role for the businessman. Mme. Vautelet's speech-making before industry groups gives them a sort of one-shot market research program in the form of a pleasant, vigorous, and articulate housewife. This year she has spoken before 60 industry or trade groups, an indication of how CAC's viewpoint is courted.

• **Voicing Consumer Grips**—At these meetings she pinpoints legitimate consumer grips—a dishtowel in a soap box that crushes all the flakes, for instance.

"Then," she says, "I dwell on consumer motivation, the housewife's psychology. I'll never forget the national design show where I had to be literally pried off a modern chair on exhibit. It effectively brought home a point: There are a lot of women my size who get tired and like to sit down. We're automatically ruled out as prospects and an aspiring chairmaker thus created a limiting handicap to himself."

• **Current Projects**—Still, the CAC's main interest lies in promoting projects—through its monthly bulletin, speeches, and other media—that help the "household manager in this business of buying."

Currently on tap are these:

• Informative labeling as to fiber content in fabrics.

• Standardized sizes for children's wear—for which the government has allocated funds for research.

• Performance labeling on fabrics. "Today no housewife is expert enough to tell how a fabric will perform in wear and cleaning," Mary Humphries, CAC's textile expert, says.

• Standardized measuring cups and spoons.

• Provincial meat inspection—federal inspection applies to only about 70% of the meat consumed in Canada.

• Provincial milk laws.

• Consumer representation on all marketing boards supported by public funds—especially on milk boards.

As Mme. Vautelet bowed out—to be replaced by Miss Isobel Atkinson of Saskatchewan—she summed up her organization's work:

"CAC has plugged the void—there's no longer a missing partner at the nation's bargaining table." **END**

The thermostat on the wall—

puts comfort at your finger tips



Now if you want to, you can sit at your desk all day and enjoy complete comfort!

If you prefer a change in temperature, the adjustment indicator is at eye-level—and within easy reach of your finger tips.

This is *deskside temperature control*. The key to the whole system is the thermostat on the wall—the Honeywell Round.

Thermostatic control is automatic—all year. There's no manual on-off operation with resulting cycle of too-hot, too-cool. No more tiresome, inconvenient adjustments of switches and valves. It provides uniform comfort both winter and summer.

Thermostatic control is sensitive. The thermostat is a precision instrument; it maintains a set temperature accurately.

Thermostatic control is convenient. Unlike switch or valve types of heating control, the thermostat is always conveniently located. Changing a setting is easy and sure.

For complete information and help in selecting thermostatic controls for your office, contact your architect or engineer or call the nearest Honeywell office.

For more details on the Honeywell Round, write Honeywell, Dept. BW-9-120, Minneapolis 8, Minn.

MINNEAPOLIS Honeywell



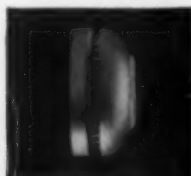
First in Controls



*The Honeywell
Round*

The thermostat that was styled with modern architecture in mind

The popular Honeywell Round is the first truly *new* thermostat design in years. Made in pneumatic, electric, and electronic models for accurate, economical and dependable control of heating or cooling in hospitals, apartments, offices, schools, industrial buildings, hotels, motels and homes.



Practical! Ruggedly designed, yet it's precision-built for long and dependable service.



Easy to use! Setting and checking are simplified by one attractive, easily read scale.

In Marketing

• • •

Two Midwest Retail Chains

Entering Jersey Standard's Fold

The major oil companies' search for new retail outlets (BW—Jun.2'56,p145) continues. Last week Standard Oil Co. (N. J.) confirmed that it was in process of buying two more independent petroleum marketing companies in the Midwest: South Side Petroleum Co. and Perfect Power Corp., in the Chicago area.

This move follows Jersey's first step into the Midwestern area last June, when it bought Pate Oil Co., with some 140 gasoline stations (BW—Jun.9'56,p70). The two new acquisitions will bring Jersey roughly 65 stations owned by the independents and roughly 50 additional stations they have under lease. They will continue to sell gasoline under their own brand names.

The trade—and the competition in the Chicago area—is watching this latest move with some interest. Perfect Power and South Side Petroleum have big, flashy stations, geared to volume sales, a minimum of service frills, and often lower prices. This would be a departure from most stations under Jersey Standard operation.

• • •

Cinemas Use Trading Stamps to Pry

A "Subsidy" From Retail Stores

Motion picture theaters are tearing a page from television's book. In effect they are getting merchants to subsidize movie programs just as sponsors subsidize TV programs. Only the medium is different: trading stamps.

Nub of the plan is to redeem trading stamps, offered at retail stores, as payment toward theater admissions. Fourteen theaters are trying it out experimentally in Fresno, Calif. These include 12 Lippert drive-ins, and 12 Fox West Coast and Stanley Warner Theaters.

Gold Arrow Stamps and its subsidiary, Prudential Premium Co., have worked out the deal. As in other stamp plans, a shopper gets a stamp for every 10¢ purchase at the store. When she gets about 400 stamps, she has a book, good for 50¢ at the box office.

The stamp-giving store pays roughly \$1 for enough stamps to fill a book. The store's reward, presumably, is more sales volume. The theater collects the face value of 50¢ from Prudential.

• • •

P&G Diversifies Still Further

Buys Charmin Paper Mills

Procter & Gamble Co. moved deeper into diversification last week when it acquired Charmin Paper Mills, Inc., of Green Bay, Wis. Charmin has facilities for making sulphite pulp, a paper making and converting mill,

and another mill not yet in production. It makes facial tissue, paper towels, paper napkins, bathroom tissue.

Last month P&G got into the baking mix business by way of the Duncan Hines door (BW—Aug.25'56,p92). And another new product—still a secret—is in the works; the company has just appointed Benton & Bowles as advertising agency for it.

P&G President Neil McElroy said that buying Charmin was a logical extension of the company's long-standing activity as a producer of chemical-dissolving pulp from cotton linters. He said that Charmin "can benefit from our long experience in producing and marketing quality household products," a strong hint that the paper consumer products business is in for some new competition.

• • •

Sales of Room Air Conditioners

Hit Peak—but Inventories Rise

In spite of a chilly summer in the East, the room air-conditioning business wound up its 1956 selling season with more to cheer than cry about. Estimates of retail sales point to a record 1.5-million units.

The one damper is this. Air Conditioning & Refrigeration Institute last week estimated that there would be a carryover of some 376,000 units in manufacturers' and distributors' hands as compared with 240,000 at the end of August, 1955. Throw in another 110,000 units in retail inventories, and you have close to a 500,000 carryover.

The big manufacturers refuse to be dismayed. Most feel that inventories are by no means out of line. A York Corp. official reports that sales of that company in room air conditioners more than doubled, while inventories are up only 2½%. Fedders-Quigan Corp. reports a "tremendous" sales increase with about normal inventories. Mitchell Mfg. Co. says it was sold out on 1956 models by the end of June. Carrier Corp. reports a sizable gain.

As ARI points out, the inventory at manufacturer and distributor level is only slightly greater than the preceding year as a per cent of sales—it's up to 30% of sales this season against 27% at one end of the 1955 season. And it's a far cry from the 75% carryover of 1954.

Prices on 1956 models are definitely in for some paring. But 1957 models are likely to be higher—partly because of the steel hike.

• • •

Marketing Briefs

Men's suits that come out of a tumble dryer ready to wear were unveiled last week. The fabric, a blend of du Pont Orlon or Dacron, was developed by du Pont with Haspel Bros., New Orleans suit manufacturer. When the fabric is tumble-dried at 160F to 170F and then cooled in the dryer for 20 min., the wrinkles disappear.

Gulfgate Shopping Center, said to be the biggest in the South, opened with fanfare in Houston last week. Biggest unit is Joske's, an Allied Stores store. Allied plans several other regional centers in the Houston area.



Sun throws new light on the problems of . . .

BUILDING MAINTENANCE

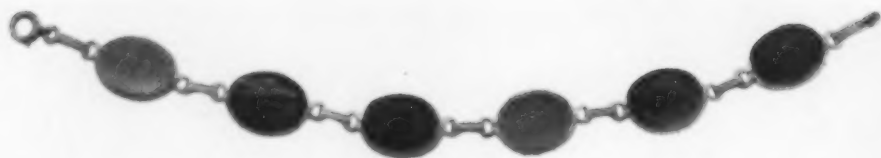
Never in history has the need or the value of established structures been so high. \$11-billion a year in maintenance and repair proves it. And the inroads of time, wear and weather make maintenance a continuing battle. New weapons are always welcome to fight water seepage, decay, wear and deterioration.

Some of Sun Chemical's major divisions devote their entire research and facilities to produce these weapons—water repellents to keep rain out . . . caulking compounds to keep warmth in . . . concrete floor repairing materials, paints, new waxes . . . hundreds of products that throw new light on problems of building maintenance. Yet, this is but one field in which Sun contributes to a brighter future. For this growing company serves virtually every major industry.

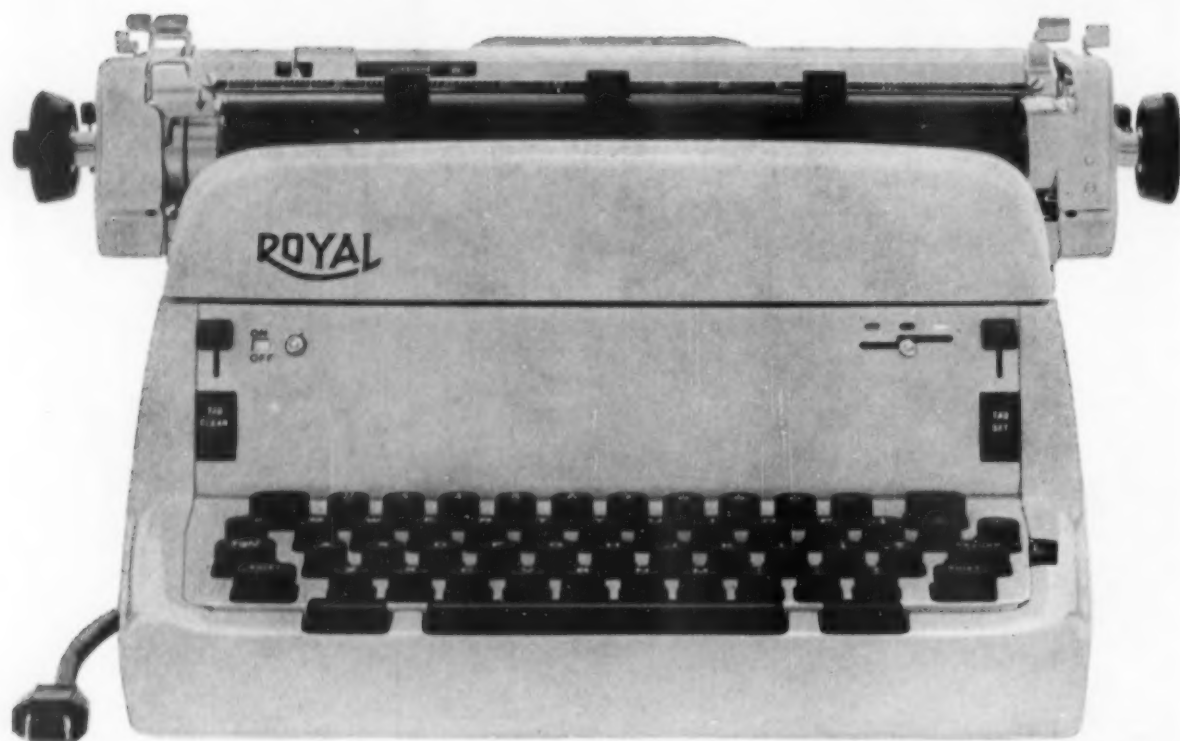


SUN CHEMICAL CORPORATION
Long Island City 1, N. Y.

DIVISIONS OF SUN CHEMICAL CORPORATION • HORN (paints, maintenance and construction materials, industrial coatings) • WARWICK (textile and industrial chemicals) • WARWICK WAX (refineries of specialty waxes) • RUTHERFORD (lithographic equipment) • SUN SUPPLY (lithographic supplies) • GENERAL PRINTING INK (Sigmond Utman • Fuchs & Lang • Eagle • American • Kelly • Chemical Color & Supply Inks) • MORRILL (news inks) • ELECTRO-TECHNICAL PRODUCTS (coatings and plastics) • PIGMENTS DIVISION (pigments for paints, plastics, printing inks of all kinds) • OVERSEAS DIVISION (export) • A. C. HORN COMPANY, LIMITED (Canada) • GENERAL PRINTING INK CORPORATION OF CANADA, LIMITED • FUCHS & LANG DE MEXICO, S. A. DE C. V.



A bracelet points the way to lower typing costs



THIS BRACELET makes a dramatic point about the new Royal Electric.

Its weight is equal to the pressure needed by your secretary to depress one of its keys.

In fact, it's 13 times easier to operate a Royal Electric than a non-electric typewriter.

This means more work per typist . . . lower

typing costs . . . better work . . . higher morale.

Here's our suggestion: Take the following figures . . . typists' salaries, days worked per year, hours typed per day and production rates.

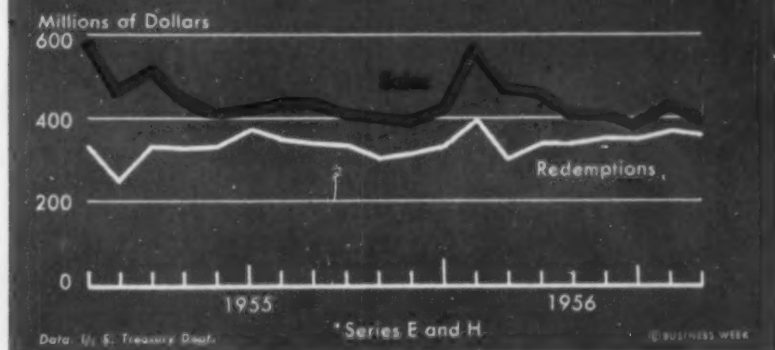
Consult your Royal Representative, and from these figures he'll be able to tell you the expected savings on new Royal Electrics.

ROYAL[®] *electric • standard • portable*
Roytype[®] business supplies

Products of Royal McBee Corporation

CHARTS OF THE WEEK

*U.S. Savings Bonds



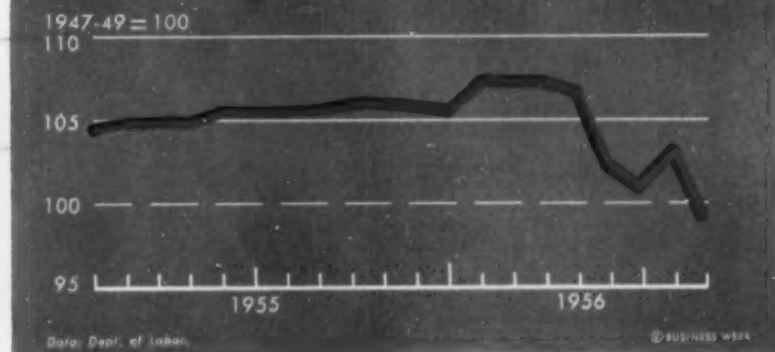
Fewer Bought, More Cashed In

U. S. savings bonds are becoming less popular as money tightens, and redemptions are creeping up on sales. In most months this year, sales of Series E and H savings bonds have fallen below the comparable 1955 months. And in almost every month, redemptions have been higher than a year ago. The

balance, however, is still tipped in favor of sales over redemptions.

Apparently savings are switching to investments yielding higher returns. It's not likely, though, that savings bond sales will turn down sharply, since they are bought largely through payroll deductions.

Plywood Prices



Nosedive From a Peak

The lower rate of housing starts this year is responsible for the dive taken by plywood prices to the lowest point since January, 1950; the housing slowdown resulted in a buildup of surplus mill stocks. In August, the price of plywood, as measured by the Dept. of Labor's index of wholesale plywood prices, had fallen 6% below the year-ago month, and had tumbled 8% from

its March, 1956, peak. The March level was the highest since August, 1953.

Prices of all lumber and wood products, including plywood, have also declined for four months in a row; but these over-all prices are only 2% under the April high. Despite this price decline, building and construction costs were at a peak in August. September costs were down less than 1%.

SINCE 1941, TMI has concentrated all its facilities on quality rather than tonnage. TMI's pioneering, Research and Improved Methods are the tried-and-true servants of America's prime users of precision tubing.



Loyalty To Our Customers IS ONE OF THE MOST IMPORTANT ELEMENTS IN TMI Tubing

By teaming quality thinking with quality production we breed a rare industrial brand of loyalty... a priceless element in every foot of TMI stainless steel and special alloy tubing. This is especially true when new design ventures into uncharted realms requiring the ultimate in performance: multiple shapes I.D. and O.D., tolerances to .001" and closer, quality that defies the x-ray... extreme heat and chemical attack.

TMI specializes in small diameters, .050" to .625" O.D. ... and in solving your tubing problems. Inquiries are welcome and receive immediate cooperative attention.

TUBE METHODS INC.

METALLURGISTS
ENGINEERS • MANUFACTURERS
BRIDGEPORT (Montgomery
County), Pa.

REGIONS



PROSPECTS get Florida's "come South" pitch for industry. Promoter's theme is, "Prosperity, plant sites aplenty."

Florida Boom: How Far Can It Go?

From Pensacola to Miami, from Fort Myers to Jacksonville, there's an electric quality in Florida's subtropical air. Floridians, and particularly the old hands down that way, are sniffing the crisp exciting smell of a boom that's

made up of a rapid growth of population, a quickening pace of business, a soaring of land values, and the speeded up activities of a ubiquitous group of industry scouts guiding expanding companies to plant sites in Florida.

• **Dangerous Word**—But in Florida, you don't call this combination a "boom." That's because "boom" to Floridians means the 1920s—the zany period when trading in lots carried real estate prices into a fantastic and short-



LAND say Florida promoters, is to live on, build on now; not as it was in the 1920s, just a commodity to be traded.



SPACE remains, wide open stretches of it ready for building and industrial development.

JOBS can be filled from "almost embarrassingly" large flow of applications that come to state employment authorities each day.



LIVING can be lush—but trap is: Can you keep your mind on the job as well?





Sparks Sales...Lowers Cost

BRACON polyethylene tubes, bottles and cans are a merchandiser's dream! Consumers are readily attracted by sight and touch... enjoy their functional simplicity. Manufacturers find BRACON packaging economical... easy to handle and transport... marvel at superb printing that provides permanent product identity.

BRACON packaging is convenient... a gentle squeeze dispenses your product—liquid, cream or powder—just where it's wanted. Practical, too, because these flexible plastic containers will not dent, crack or break.

These fabricated tubes and bottles are a European development... perfected for mass production by Bradley Container. An entirely new container, the metal-ended, plastic-bodied can (2ME*), is already the preferred package for insecticides, liquid detergents... many other products. Here is the lowest cost squeeze-to-use package for 6 fluid ounces or more.

BRACON containers are ideal for foods, pharmaceuticals, cosmetics, household, automotive and chemical specialties. Write for details.

*U. S. Reg. T. M.



BRADLEY CONTAINER CORPORATION

Subsidiary of Olin Mathieson Chemical Corporation

Maynard, Mass. — New York, Chicago, Los Angeles, Toronto

lived world of their own. It was fun while it lasted, but its end was brutal.

This time, expansion (the word Floridians prefer) is different. At least, that's what Floridians themselves—and a number of outsiders—maintain.

Population is growing fast, industry is moving in rapidly, the vacation season has become year-round, agriculture is richer and its markets broader.

• Limitations—But industry isn't going to turn Florida into another Pennsylvania; population isn't going to make it another California. The state's geography, topography, and geology all combine to place strict limits around its potential growth—so far as the foreseeable future goes, anyway.

This doesn't mean that inherent in the current boom there's an imminent risk of a return to the zany days of the 1920s. Florida's economy, say economists who have inspected the state closely and plotted its future carefully, is like a three-legged stool nowadays; each leg (tourism, agriculture, industry) is sound, though not of the same length. But in the 1920s, industry was negligible, agriculture was weak, and tourism's strength came from the wealthy who spent only the winter months in the state.

I. Roaring Twenties

The old boom that was built on this rickety foundation involved land prices.

That madness began in 1924. Florida was the vacation preserve of the wealthy, but thousands with lesser incomes also yearned to loaf in Florida, and many thought they could make their million speculating in Florida real estate.

• The Fun—They bought their lots off the map, sight unseen; they bought "binders," entitling them to a lot, for which they paid 10% down and promised to pay another 25% in 30 days. Most planned to sell their "binders" for a quick profit even before the first payment was due.

Some people did build, of course. In fact, in October, 1925, builders took out \$15-million worth of building permits in greater Miami.

But the end wasn't far off. The single-tracked Florida East Coast RR couldn't begin to carry all the food, furniture, and building materials that were needed. In August, 1925, it put an embargo on freight.

• The Cost—Builders had nothing to build with, people genuinely interested in homes couldn't get them. Quickly, under all this strain, the dreams of the amateur speculators faded. They, and the promoters, could find no takers for their binders. Payments came due; then taxes.

The end was spectacular. On Sept. 18, 1926, a hurricane struck and bat-



How to put a show "on the road" ... with RCA 16mm Film Projectors

With giant trailers such as the one above, Firestone Rubber Company brings its powerful sales training program to the doorsteps of its dealers in hundreds of scattered communities. Aboard each mobile unit, RCA 16mm motion picture projectors provide top quality reproduction of important training films. Easy to set up and thread, simple to operate, they can be operated by sales personnel who may never before have handled a projector or motion picture film!

Lightweight and easily transportable, RCA Projectors have become a valuable tool of industry for selling in the field. In schools, churches, civic groups and hotels they are widely used to teach, train, demonstrate, inform. For outstanding, professional quality in projection equipment, the choice is increasingly RCA.

For free booklet on the profitable uses of RCA 16mm Film Projectors, or for information on other RCA electronic products, write Radio Corporation of America, Dept. JD-26, Bldg. 15-1, Camden, N. J.



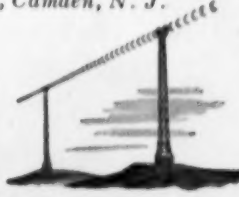
RCA Sound Systems are engineered to give the best in internal communications. Widely used by industrial plants, schools and large institutions for speech or music.



RCA Electron Microscopes are vital research tools of science and industry. They permit clear observation and photography of particles less than 1/5,000,000th of an inch.



RCA TV Cameras, used today in many television stations, are part of a complete line of high quality equipment RCA supplies for radio and television broadcasting stations.



RCA Microwave provides point-to-point communication by radio signals. For pipelines, railroads, utilities, government agencies and other qualified users.

RADIO CORPORATION of AMERICA



LOOKING SOUTH



SOUTHERN CATTLE graze on lush "permanent" pastures that will be green long after snow blankets fields elsewhere. Beef herds in Alabama, Georgia, Florida and Mississippi have grown 25% to 17½

million head in just five years; value-on-the-hoof has increased from \$237 million in 1946 to \$418 million now. Result: farm incomes are up and meat packers, old and new, are doing a brisk business.

The march of the South has just begun!

THE REASONS for the amazing growth of the Southland are easy to understand. Incomes are up here . . . the rate of growth is greater than that of the nation as a whole . . . and increased incomes mean greater buying power. Southern producers, and producers all over the nation who sell to the South, have felt this increasing demand and have taken steps to meet it by expanding present plants or building new ones here. Still more employment results, incomes continue to grow . . . the cycle recurs.

The operating companies of The Southern Company system have taken a leading part in promoting the growth of the area, and have provided ample electric power to meet all the needs of expanding industry and better living.

The march has just begun . . . the last half of the twentieth century belongs to the South!



TOMORROW'S TEXTILES are in test tubes at the Shawmut, Alabama Research Division of West Point Manufacturing Company. The West Point lab developed the Micronaire method of measuring fineness of raw cotton fibers, now used around the world.



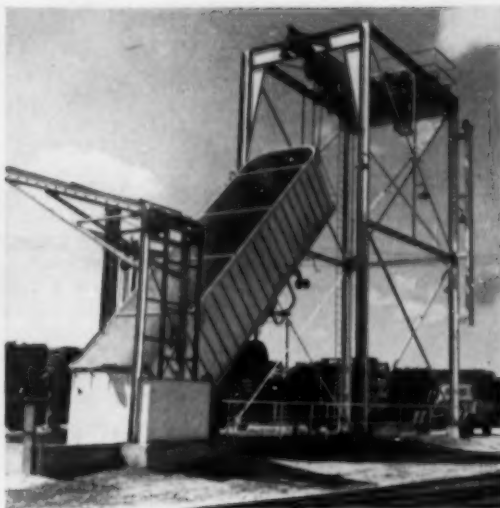
UNCOVERING COAL 100 feet underground is the job of this mammoth machine at the Robbins Coal Co. strip mine, near Oneonta, Alabama. Shovel moves 23,000 tons of rock and dirt a day. Alabama's 266 mines produce over a million tons of coal a month; it is transported to markets by rail, barge and truck. The South's largest coal user is The Southern Company system.



THE CLOISTER, on Georgia's historic Sea Island, is just one of hundreds of coast line resorts in Dixie that stay open the year around. Guests, including more than 2,000 honeymooners a year, come from all parts of the nation. Nearby attractions are Ft. Frederica ruins, and Christ Church where John Wesley was once pastor.



THREE QUARTS A SECOND pass through this "closing machine" at the Standard Oil canning plant, Panama City, Florida. The plant's lubrication oil storage capacity is 1,435,900 gals. Erected to supply Southern markets, Standard Oil has increased plant capacity 50% in 6 years.



TRUCK TRAILER dumps wood chips at the first Masonite plant, Laurel, Miss. Here, 3,000 employees, farmers, other suppliers share \$23 million a year. New \$14 million plant expansion will increase production 25%. Masonite is the world's largest hardboard producer.

ATLANTA JOURNAL-CONSTITUTION PHOTO



RAMBLIN' WRECKS from Georgia Tech make mighty good engineers. Last season, Tech's Varsity scored scholastically higher than the all-student average. Georgia Institute of Technology, Atlanta, is just one of 15 major schools in the Southeast training engineers for jobs in industry.

Shaded section designates area served by the four investor-owned electric power companies in The Southern Company system.

THE SOUTHERN COMPANY



ATLANTA · BIRMINGHAM

Alabama Power Company Birmingham, Alabama	Gulf Power Company Pensacola, Florida
Georgia Power Company Atlanta, Georgia	Mississippi Power Company Gulfport, Mississippi



"Floating-Hub" casters safeguard new Lycoming T53

Intricate aircraft engines like Lycoming's new T53 take a lot of babying during assembly.

Reason for such careful handling is the danger of "fretting corrosion"—a vibration resonance often caused by movement over uneven surfaces. That's why the Lycoming Division, Avco Mfg. Corp., puts its new compact, high-powered gas turbine engine on assembly stands equipped with Bassick Floating-Hub casters.

No mere "baby carriage"

In "Floating-Hub" construction, the mobility of the hub under spring control allows the wheel to ride up or change position in the caster frame without lifting the load carried. It has an inherent ability to absorb both vertical and horizontal shocks and to snub out bouncing. Sprung mounted casters which give only a "baby carriage" type of ride can't match "Floating-Hub" performance.

Takes on tough jobs, too

Floating-Hubs aren't used only to handle fragile loads. Their shock absorbing ability also suits them for rough service carrying heavy loads over uneven floors and ground. Bassick distributors and service representatives can help you select the right casters for your needs.

THE BASSICK COMPANY, Bridgeport 2, Conn. In Canada: Belleville, Ont. 610



Bassick
A DIVISION OF



MAKING MORE KINDS OF CASTERS... MAKING CASTERS DO MORE

tered Miami—and wrecked what little hope remained among the speculators and their victims.

II. The New Boom

The smell of today's boom in Florida is different, because in the 30 intervening years (and mostly since the end of World War II):

- Population—now 3.6-million—has tripled.
- Tourism has become a year-round business that no longer relies solely on the wealthy.
- Agriculture is broader, richer, more stable.
- Manufacturing has vastly larger investment and payrolls.

But it takes investors decades to forget so spectacular a bust as Florida had in 1926. There's still a national wariness of Florida's economic soundness.

Skeptics aside, people are still flocking into Florida—700 families every week, according to the Florida Development Commission.

Some arrive with no idea of what jobs they can find when they get there. Many come because they've been tempted to retire at a comparatively early age and live in Florida.

• **Skills Aplenty**—As a result, Florida has an excess of skilled workers. Many of them are retired, but skilled people are manning service stations and drugstore counters. Somebody, they reason, will come down sooner or later and require their talents. When General Electric Co. recently announced a plant for the St. Petersburg area—its first in Florida—many retired employees living in the district decided to rejoin their former company.

• **Lured South**—However, the bulk of the 700 families coming to Florida each week are headed by men who, lured by ads in Northern newspapers in which industry makes the appealing pitch "Come to work and play in Florida," are signed up for jobs before they arrive. These are the men who are staffing Florida's expanding industry.

In June and July, more new plants were started, more industrial expansions begun in Florida than in any other Southern state. More than 5,000 industrial plants are now scattered through Florida. And hardly a week passes without the announcement of some plan for a large new plant for the state. Among the latest: a \$20-million expansion of Buckeye Cellulose Corp.'s plant at Perry; a \$4-million airplane systems plant to be built by Minneapolis-Honeywell Regulator Co.'s Aeronautical Div.; a new acrylic textile fiber plant to be built near Pensacola by American Cyanamid Co.; an airplane engine plant to

be built by United Aircraft Corp.'s Pratt & Whitney Div. in Palm Beach County.

Altogether, more than \$500-million has been spent on industrial expansion in Florida since the mid-1940s.

• **Main Growth**—Chemicals and paper products, metal fabricating, food processing and manufacturing, and construction supplies have made the biggest gains. Florida is now seventh among the chemical manufacturing states—in large part through the production of Chemstrand's new \$88-million nylon plant located at Pensacola.

The state's own building spree (construction has jumped from a \$362-million operation in 1949 to a \$1-billion a year business today) has given its building materials suppliers a healthy market.

• **Industry's Gains**—Statistics plot the growth of manufacturing in Florida. The Federal Reserve Board's indexes show that manufacturing employment in the state has risen 47% above the 1947-1949 figure, compared with an average national gain of 6%. Manufacturing payrolls in Florida are up 130%; the national average shows a 58% gain.

Food processing is by far the largest part of the state's manufacturing industry. And the bulk of its wealth comes from citrus fruit, which has made enormous gains since 1948 through marketing of frozen juice concentrate. Of the state's 1955 orange crop, 51% went into concentrate.

• **Agriculture's Power**—The citrus groves are still the backbone of the state's agricultural economy. They bring in close to \$200-million a year. But Florida's agriculture is becoming less and less dependent on a single crop. There are 1.4-million head of cattle—a \$117-million-a-year business—in central Florida. The state's truck farms grow 11% of the nation's vegetables and truck crops. Florida's farm income, growing fast, is expected to reach \$550-million this year.

III. More All the Time

Agriculture's stability is more than matched by what has been happening in the tourist business in the last five years.

Last year, according to American Express Co., which has an unbiased interest in tourist figures, more than 6-million people vacationed in Florida and spent more than \$1-billion there. The number of summer tourists crept up still more on—and, in some resorts, passed—winter totals.

One of the best barometers of tourist business—gasoline sales—were up far more than usual this summer. Sales tax collections, another good




**When it
comes to POSTING...**

**these 10 keys
make all
the difference**



Underwood Sundstrand's 10-key touch-operated keyboard is easy to learn, increases your operators' speed and accuracy, ends eyestrain and "head-swing" fatigue. It's a "natural" for posting—

Accounts Receivable right through to General Ledger. The keynote is simplicity—the simplicity of the new standard in keyboards—10 keys. For full details, call your Underwood Office, or write:

UNDERWOOD  CORPORATION

ONE PARK AVENUE, NEW YORK 16, N. Y.

This is the story of one of the many contacts made by Square D Field Engineers which resulted in increased production or reduced cost—or both



It took More than a Pipe Dream to lick THIS job!

The engineering company which was assigned the tremendous job of coating this oil pipe line, faced a tough problem in electrical control. For top efficiency, the control had to be designed to operate either from public utility service or from a portable generator. It had to be weatherproof. And most important, it had to be mobile to avoid dismantling and rewiring every time the coating plant was moved down the line.

A Square D Field Engineer was called in on the job. He designed a complete distribution and control system, comprised mostly of "standard" equipment supplied from a Square D distributor's stock. Special items were rushed through one of Square D's strategically located assembly plants.

Besides meeting every rigid specification, this system led to substantial savings in both time and materials.

At your service—in 3 important ways

Field Engineering Counsel is available through Square D branch offices in all principal United States cities—and in Canada, Mexico and England. Backing up this counsel are the design and manufacturing facilities of 14 strategically located Square D factories and the localized services of a nation-wide network of authorized electrical distributors.



NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE!



SQUARE D COMPANY



BIGGEST OPERATOR Arthur V. Davis, at 89, is buying large slices of Florida.

guide, were 20% greater this July than in July, 1955.

• **Too Much?**—The boom here has led to a wild leap in hotel and motel building. Some bankers and businessmen feel there has been entirely too much of this. Financial houses are wary about putting big money into many projected hotels and motels. This has led to an increase in syndicate financing and, frequently, to second and third mortgages on new hotels and motels. Some observers estimate that even a 20% drop in tourist income over a few months could threaten bankruptcy for many hotel and motel operators who must make pyramided mortgage payments.

They could be right. But the question is: Is such a drop in tourist income likely?

• **No Dip**—So far, at least, Florida's vacation business has been even more stable than the national economy; it has risen and fallen less than national business and industrial figures, and wasn't affected by the dip in 1953.

IV. Above the Crowd

Where there's growth like this in an underdeveloped area—and money to be made—you're bound to find one or two personalities showing up boldly from among the rest of the scurrying investors.

• **One-Man Show**—Probably the biggest name in Florida just now is Arthur Vining Davis. He would be a figure just for the money he spends. His fame is even more firmly guaranteed by the way he spends his money.

In 1948, at the age of 81, Davis, then as now board chairman of Aluminum Co. of America, quietly drifted



Mercury Batteries...
another Mallory first

From sunshine to shadow... Every Scene a "Good Take" Automatically



As the light changes, the lens in the new Electric Eye Movie Camera sets itself automatically with a miniature motor powered by tiny Mallory Mercury Batteries.

Now you can shoot good movie sequences, even when the subject is moving from sunlight to shade—without interruptions to change the exposure. The new Electric Eye Camera does it for you automatically; analyzes lighting conditions, coordinates film and camera speed, quickly sets the proper lens aperture.

Tiny, long-lasting Mallory Mercury Batteries supply the power that helps translate into action what the electric eye sees. These are the same Mallory Batteries that have helped make possible the smaller size and fine performance of pocket-size radios and recorders, easily concealed hearing aids, camera photoflash guns.

Mallory pioneered the unique mercury battery to provide complete dependability and exceptionally long life in miniature size. These batteries—entirely different

from the conventional type—last far longer, in service or while lying idle. They are a perfect team-mate for transistors in exciting new electronic products.

Mercury batteries are another Mallory first—a product of research ingenuity, engineering skill and precision production. They are one of many progressive Mallory developments in the fields of electronics, electrochemistry and specialized metallurgy performing vital service for the country's growth industries.

MALLORY

SERVING INDUSTRY WITH THESE PRODUCTS:

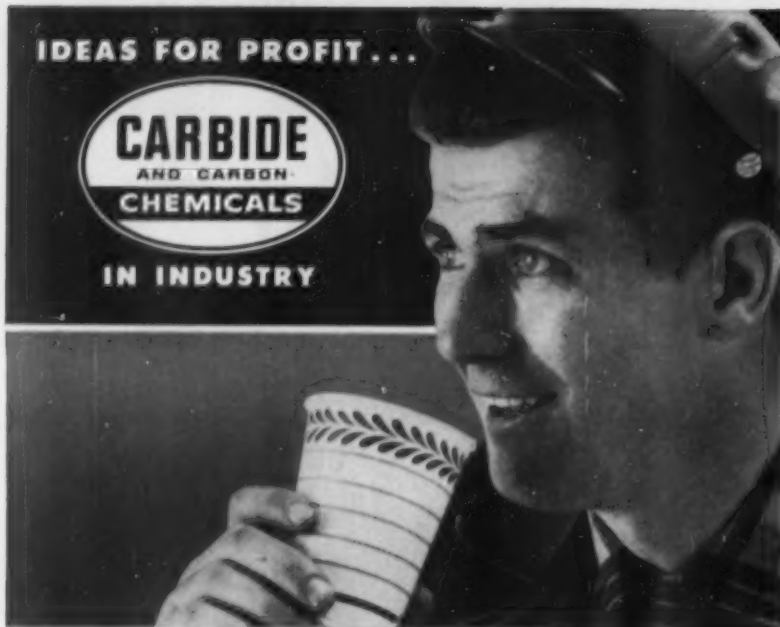
Electromechanical • Resistors, Switches, Tuning Devices, Vacuum Tubes
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IDEAS FOR PROFIT...

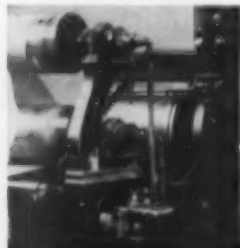


IN INDUSTRY



Hot stuff on paper

Colorful, sales-making decorations on paper cups and plates have to stand up to steaming liquids and sizzling foods. CARBIDE solvents in printing ink formulations help colors penetrate and stay bright without running when used for hot food service.



SHOWER BATH FOR WET FELT

Felt belts that remove excess water during paper making get plugged with pulp, tars, gums, and resins. But the felt can be thoroughly cleaned with solutions containing TERGITOL surfactants which wash out dirt. These surfactants also make better emulsions, stop liquids from foaming, and turn water into a more effective fire-fighter.



INTERFERING WITH STATIC

Synthetic fabrics are quick to build static that attracts dirt, dust, and lint. Now, a new chemical—NIATEX Antistatic AG-2—has come to the rescue. Fabrics treated with this antistatic agent resist static build-up even after repeated washing or dry cleaning.

CARBIDE AND CARBON CHEMICALS COMPANY
A Division of Union Carbide and Carbon Corporation
30 East 42nd Street UCC New York 17, N. Y.

Please send me details on CARBIDE chemicals for _____

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Company _____

Address _____

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CARBIDE
AND CARBON
CHEMICALS

Call in the CARBIDE technical man... to help you put these or other CARBIDE chemicals to profitable use in your business.

away from his headquarters in Pittsburgh, telling the company's officers he had a few things to attend to down South.

Today, he holds one-eighth of the presently usable real estate in Dade County (where Miami stands); 25,000 acres in Broward County (where Fort Lauderdale stands); big holdings near St. Augustine and Tallahassee; and he's owner of the Boca Raton resort. He owns all or part of about 30 enterprises in the state.

Land development is only part of his Southern empire. He's owner or part owner of two Florida airlines, a shipping line operating from Miami, tropical plant nurseries, hotels, banks, dairy farms, an ice-cream factory, and a farm equipment agency.

Davis' operations are larger than anything Florida has known for years. But since he loathes publicity, he has been until recently a mysterious—and to some, menacing—figure in Florida's development. Some say the leap in land values is caused largely by his buying; that owners are hanging on to their land hoping they'll get a "Davis price" for it; and that, when Davis dies there'll be a sudden slump in land values.

Davis himself—and other observers as well—holds no brief for this idea, and says he is not paying inflated prices for the land he buys. Still, there's concern among Florida realtors that when Davis dies, his estate may put many of his Florida holdings on the market to pay estate taxes.

• **Family Operation**—Less notable operators are busy in Florida, too. One group that's acquiring property rapidly is the Sotille family—called the "Gianinis of the South."

Head of the family is James A. Sotille, Sr., who's 78. He came to the U. S. in 1889 at the age of 11 from his native Italy, moved to Miami in 1924 and began farming in Dade County in 1935.

The latest estimate of his and his family's holdings in Florida is \$50-million. Until 1951, the Sotilles were known only as farmers and land-owners—their acreage produced an estimated \$25-million worth of truck crops a year. Then they moved into banking. Last year, in just nine months, they gained control of five substantial banks in southern Florida.

Sotille's sons now direct most of the family empire. James, Jr., runs the banking operations; William, the farms.

V. Limits on Growth

You hear some high-flown estimates of how far people like Davis, the Sotille family, and other investors can take Florida in the next 10 and 20



No danger of stalling the engine under peak loads like this when the shovel has a National torque converter

Why torque converters for heavy-duty machinery?

To see why, analyze the way a heavy-duty machine works. A big earth-moving shovel is a good example. When it is digging into a bank it needs to exert great force without stalling the engine. As it swings, dumps its load and returns, the forces are smaller but the speed will be higher.

This can all be controlled, to be sure, by slipping the clutch and changing the speed of the engine. But that means a stop-and-start working motion. Also, the engine puts out full power only part of the time. The effect is to slow down the shovel's operation and cut down the work it can do.

A much more profitable solution is a National torque

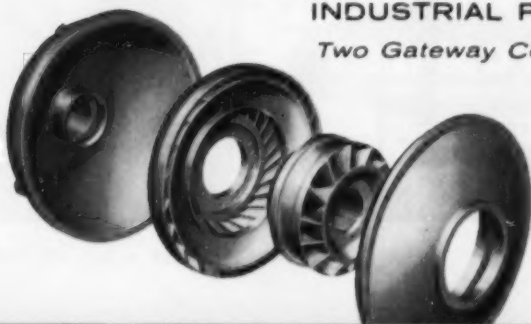
converter. With it the shovel automatically adjusts its own power and working speed to the changing load. The adjustment is smooth, stepless and continual. The National torque converter saves the engine from ever stalling or even being overloaded. It absorbs shock and vibration. Not only does the shovel do more work, its engine needs less maintenance.

If you operate a shovel or any other kind of heavy-duty machinery from 100 to 1000 horsepower, National torque converters can probably help you. Let a National Supply engineer study your power transmission problem and find out. The National Supply Company, Two Gateway Center, Pittsburgh 22, Pennsylvania.

THE NATIONAL SUPPLY COMPANY

INDUSTRIAL PRODUCTS DIVISION

Two Gateway Center, Pittsburgh 22, Pa.



*Pace-setters in the progress of
industrial power transmission*



*HOLIDAY GIFTS that
sell for you the
year 'round!*

YOU put your sales story at their fingertips... when you put it on genuine Scripto pens and mechanical pencils. Quality and consumer acceptance is beyond question! Scripto out-sells all other makes by far; more than 70 million were sold last year!

SCRIPTO makes over 40 models — ball pens with Rx* ink, pencils, sets — a complete line! There are 11 sparkling barrel colors... two-tones... 9 contrasting sales message inks! Whether you can spend a few cents or a dollar or more per item, you can afford to use Scripto!

FINGERTIP SELLING ideas! Use Scripto pens and pencils as calling cards... as door openers... in grand openings... at conventions... in sales campaigns... to win the cooperation of jobber salesmen and retail clerks... as gifts to plant visitors. For complete details, send the coupon now—



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Tell me more about using Scripto pens and pencils in my sales promotion activities. Rush me full information, including prices.

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TITLE _____
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COMPANY ADDRESS _____
CITY _____ STATE _____

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TO ESTABLISHED ADVERTISING SPECIALTY SALESMEN: A few choice U.S. Territories are still available. Write for complete information! *T.M.R.

years. But you cannot forget the realities of Florida's situation.

• **Strikes Against It**—It's isolated from the rest of the country, and from the big markets. It's so flat that cheap hydroelectric power cannot be produced. It's poverty-stricken as far as coal supplies are concerned, poorly supplied with reserves of natural gas. All these factors put firm limits on how far Florida can develop.

• **Choice Industries**—For the bulk of its industrial development, Florida has to count primarily on industries that turn out products that are (1) made from the state's own resources, (2) light enough, specialized enough, or sufficiently unfabricated, to make freight costs and delivery time unimportant.

• **Forecast**—Economists from outside the state recognize this. Nevertheless, when Arthur D. Little, Inc., recently surveyed the Florida east coast's prospects it reported that within 15 years, industrial activity in the area will increase fourfold, with big growth in electronics, instruments, plastics research and development laboratories, office machines, aluminum extruding, and the aircraft industry.

• **Climate—of Business**—To achieve this kind of growth, Florida counts on it climate—not just the sunshine, but the business climate, too. The state's industrial boosters put heavy emphasis on the fact that Florida has no state income, property, or severance taxes. (It gets half its revenue from retail sales and gasoline taxes, one-third more from taxes on autos, beverages, cigarettes, and racing.) Another factor that weights heavily companies' decisions to move to Florida is the availability of labor. In the critical field of recruiting engineering talent, some companies that advertise for staff in Florida say they get an "almost embarrassing" number of applications from Northerners and Midwesterners who want to move South.

Meantime, resort areas' old phobia against industry is easing. But it's by no means dead yet. Civic squawks in Fort Lauderdale drove away a proposed refinery; a Daytona Beach businessman says, "Why go out and look for industry when we have our hands full continually developing tourist trade?"

• **New Picture**—In that lies one of the chief current difficulties of the state's industrial promoters—to many outsiders the mental image of Florida remains a mixture of bathing beauties and oranges. The promoters frequently find it difficult to persuade prospects that Florida is getting a smattering of industry, that it's beginning to learn how to treat industry well, that it has remembered its lessons from the bust of 1926. **END**

T

TOWERING TOWMOTOR

Need elbow-room? More office space . . . more storage . . . more production space? Towmotor Fork Lift Trucks provide an effective answer to "growing pains" in all types of business and industry. By stacking materials 3 and 4 tiers high in yard or warehouse, *Towering Towmotor* equipment makes every square inch count, indoors and out.

You can take advantage of this high-stacking ability to increase your present storage capacity—without the need, or expense, of increasing over-all area.

Before you consider a costly "expansion plan," find out how you can make maximum use of your present facilities. Call your nearest Towmotor Representative . . . or write for Job Studies covering your industry. TOWMOTOR CORPORATION, Div. 209A, 1226 E. 152nd St., Cleveland 10, Ohio.

*There's only one Fork Lift
Truck called TOWMOTOR*



America's Best Engineered Fork Lift Truck

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Measure glove cost by PERFORMANCE ... not PRICE!

The difference between *first costs* and *replacement costs* is the difference between ordinary work gloves and Jomac Gloves. While bargain buys are wearing out and are being replaced, sturdy Jomacs are being used, cleaned or reconditioned, and reused again and again. Jomac quality means better service, longer life, lower *net costs*.

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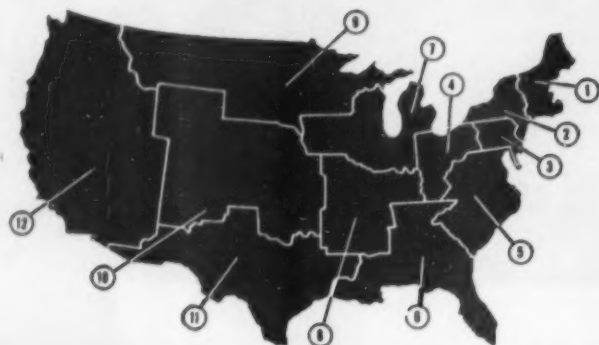
Jomac manufactures all types of hand and forearm protection—all made from famous loop-pile Jomac Cloth. This porous fabric cushions hands against sharp metal, insulates them against extreme heat. Get full details. Write for the new Jomac Industrial Work Gloves Catalog. Jomac Inc., Dept. A, Phila. 38, Pa.

JOMAC INDUSTRIAL WORK GLOVES

PROOF that quality means economy

The Income Pattern: Business Week's Regional Income Indexes

U.S. Incomes: Up 5.2% From Last Year



©BUSINESS WEEK

Federal Reserve District	% Change vs. year ago	The Indexes		
		July 1956	June 1956	July 1955
1. Boston	+6.3%	273.0	273.0	256.7
2. New York	+4.7%	289.2	285.2	276.1
3. Philadelphia	+3.7%	284.6	291.8	274.5
4. Cleveland	+4.6%	334.1	342.9	319.4
5. Richmond	+5.2%	355.9	355.4	338.2
6. Atlanta	+6.7%	447.3	438.8	419.3
7. Chicago	+2.0%	338.1	344.7	331.4
8. St. Louis	+4.0%	324.5	319.8	312.0
9. Minneapolis	+6.3%	346.2	349.8	325.7
10. Kansas City	+1.2%	399.2	403.0	394.4
11. Dallas	+7.8%	484.6	481.9	449.7
12. San Francisco	+10.3%	392.4	386.1	355.6
Nation	+5.2%	342.4	342.8	325.6

1941 = 100; adjusted for seasonal. July figures preliminary; June revised.

First Setback of the Year

The slowdown in the output of the nation's mines and factories during July put a crimp in the income curve for the same month. The nation's income had been rising all year. The decline was, of course, largely due to the steel strike.

U.S. incomes in July, 1956, still were 5.2% ahead of July, 1955, according to BUSINESS WEEK's Composite of Regional Income Indexes. But the gain was the smallest year-to-year increase in 13 months. Regional gains ranged from 1.2% in Kansas City to 10.3% in San Francisco. Cleveland incomes, which had been running more than 10% ahead of a year ago throughout the past 12 months, were up only 4.6%.

• **Losses**—On a month-to-month basis, the nation's income skidded 0.1% from June to July, 1956, the first decrease since January. Only half the regions

showed gains. The sharpest dips were registered in Cleveland, Philadelphia, and Chicago. But income in these regions is expected to snap back, since steel output returned to 75% of capacity in August.

Chicago incomes also have been depressed by layoffs in the auto industry. Reports indicate that the auto industry may show a slight dip in employment through September, but most auto centers are looking for things to pick up shortly afterward as production of 1957 models gets into full swing.

July incomes in the Minneapolis region also were adversely affected by the steel stoppage. They were down 1% from June. Employment was off in the transportation industry—primarily on railroads and Great Lakes carriers hauling iron ore—throughout the state of Minnesota. **END**



DURABILITY

Textile colorants, printing inks and industrial finishes are tested for durability every day by actual use. But before these chemical coatings can be put to the final test of year-in, year-out usefulness, they must first pass rigid accelerated examinations in Interchemical's laboratories which may be far more exacting than any future service requirements. Tests for color fastness, abrasion resistance, flexibility, washability and others are typical of those used by Interchemical in its attack on problems of durability. If your product requires a chemical coating for protection or decoration, Interchemical Corporation offers the authority of specialized experience.



Interchemical technicians measure the destructive effects of simulated sunlight and moisture on chemical coatings under controlled accelerated conditions. A few days in this Weather-ometer represent months of normal outdoor exposure.

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*TRADEMARK

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FACTS ABOUT MACKS

Did you know that many of the most modern features in passenger cars, such as power steering, power

brakes, non-spin differentials, and a host of others, were originally engineered by Mack for Mack trucks and buses? Features like these point up the continuing quality research and development program which assures every Mack owner of the very latest in proved mechanical and structural advances.



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MACK ELECTRONICS DIVISION, INC.

**In grading operation... roadbed preparation...
overpass construction — Macks help maintain
clockwork schedules over the most unfavorable
terrain or footing.**



**This planned vast national
superhighway network
will be built by Federal
and state government co-
operation.**





The tools of the designer and the engineer, the blueprints which translate their ideas into great steel mills, the raw materials and finished steel—these are the elements of this painting in which Stanley Meltzoff dramatizes America's ever-growing steel industry.

United Engineers has the skills and the know-how that come from working with many of the country's largest steel companies. As designers, construction engineers, and engineering consultants, we have time and again served this giant industry by building power plants, rolling mills, coal chemical plants—installations of the widest diversification. Each presented its own problems—successfully solved on schedule and within the budget.

Best proof of the flexibility and depth of our services—and the satisfaction received—lies in the fact

that more than 90% of our work comes from clients previously served.

No matter what the project—steel mill or pipeline, steam or hydraulic power plant, chemical plant or railroad shop—United Engineers has the skill and creative ability to augment the engineering staff of your own organization.

Our background of more than 70 years' experience is your assurance of getting the maximum return for each dollar expended. We invite you to investigate and profit from this experience.

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• • •

FTC Wins Its Point in Case

Against Pin Manufacturer

For the first time under the antimerger law, the Federal Trade Commission has forced a company to dispose of the very property it tried to pick up through an acquisition.

Last March, FTC charged that Scovill Mfg. Co., Waterbury, Conn., the nation's largest manufacturer of safety and common pins, violated the antimerger law by acquiring the De Long Hook & Eye Co., Philadelphia, a principal competitor. Both Scovill and De Long make other products, but FTC contended the combination of the two companies' pin capacity would lessen competition or create a monopoly in that industry.

Though Scovill denied this would be the result, its lawyers proposed settling the case without litigation. FTC agreed, and this week the commission approved terms of a consent decree order.

The FTC order prohibits Scovill from making safety or common pins in the Philadelphia factory acquired from De Long, and requires Scovill to sell all the safety and common pin machinery in the De Long plant within 90 days. The purchaser gets all trade names, trade marks, and good will relating to De Long pins.

• • •

Administration Gives Go-Ahead

On 28 New Federal Buildings

The Administration this week approved the lease-purchase of 28 new federal buildings worth some \$200-million. The package contains business for 20 states, and includes the biggest single lease-purchase building yet contracted—a \$65-million job in New York City.

The buildings will be constructed by private operators and leased to the government for long terms. After a specified period of "rental," they become government property.

• • •

Tax Relief for Steel Industry

Is Dumped in Cabinet's Lap

This week, the Eisenhower Cabinet was handed the task of deciding what to do about proposals for initiating a new round of accelerated depreciation allowances to spur steel industry expansion.

At midweek, there were indications that the Cabinet would discuss the question at a meeting scheduled for Friday. Reliable information indicated the proposals may be in real trouble.

For one thing, the Defense Mobilization Board—whose membership includes seven of the 10 members of the

Cabinet—declined to make a decision, passing the buck to the full Cabinet. For another, Commerce Secy. Sinclair Weeks was reported now leaning to the negative side on the grounds that defense needs are not great enough to justify special tax benefits for steel. Treasury Secy. George M. Humphrey has consistently opposed new rapid tax write-offs.

• • •

Southern Railroads Hold Out

Against Freight Rate Hike

Southern railroads are running true to form by holding out once more as the railways map a campaign for a hefty new freight rate increase.

Eastern and Western carriers agreed last week in a Washington strategy meeting to petition the Interstate Commerce Commission for a 15% rate hike. Representatives of Southern carriers sat in on the conference, but withheld their endorsement of the goal. But in the past, the Southerners have been the last to come in, and yet may subscribe to the plan.

In Washington, the figuring is that ICC, which granted a nationwide 6% freight rate boost last spring, will give the railroads considerably less than 15%, if anything at all.

• • •

Earnings of Retail Employees

Will Be Surveyed by BLS

Bureau of Labor Statistics plans a comprehensive nationwide survey of the earnings of 6-million retail trade employees this fall. The data will be assembled from a mid-October payroll period and will include information on hours worked as well as wages.

BLS chief Ewan Clague says plans call for reporting the data on a nationwide basis, and also for breaking it down by major regions and by city groupings within the regions.

• • •

Food Agency Remains Aloof

In Drug Industry Fight

The Food & Drug Administration is being pressured to get into the fight between drug trade groups and "outsiders" (such as supermarkets) that employ no registered pharmacists but that market nonprescription drugs.

FDA, thus far, is resisting the pressures.

Three leaders of the pharmacy trade tried quietly in recent weeks to obtain FDA's support. The trade contends that all drug sales, even those for which prescriptions are not required, should be limited to places where trained pharmacists are on duty.

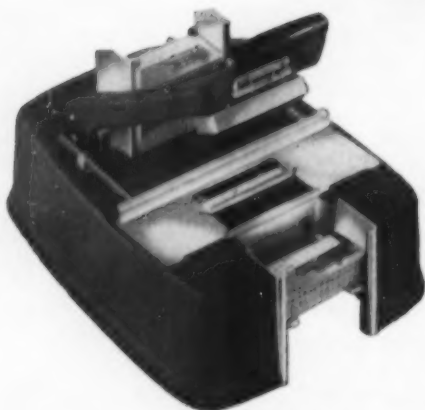
Opponents of this viewpoint are manufacturers of proprietary drugs (patent medicines). They are challenging restrictive state laws that ban sale of their products to supermarkets and other outlets.

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better, faster, for less with

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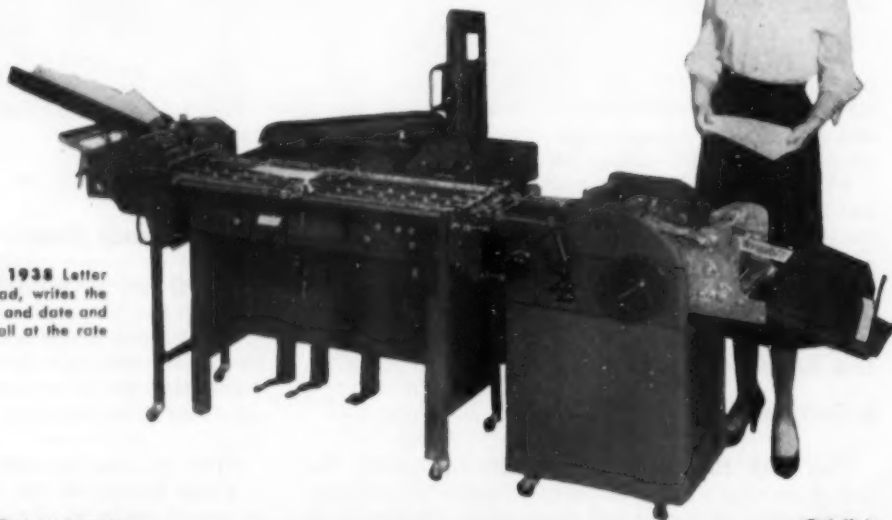
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Writer prints the letterhead, writes the
letter, fills in the salutation and date and
signs the letter in color—all at the rate
of 3,000 an hour!



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SERVING SMALL BUSINESS—BIG BUSINESS—EVERY BUSINESS



Emile Bustani (right) of Lebanon runs a fabulous business operation in the Middle East. For him, Western business principles and political acumen add up to . . .

An Arabian Success Story

Emile Bustani (above)—one of the most important businessmen in the Arab world—watched carefully this week as the Suez crisis continued to unfold. What happens over Suez will probably determine the fate of Bustani's business operations.

Bustani is chairman of Contracting & Trading Co.—known throughout the Middle East as CAT and reputedly the largest Arab-owned company operating there.

• **Western Ties**—It's the nature of CAT's business that makes the present political crisis all-important. Whether CAT's enterprises are building palaces for sheiks, constructing pipelines for the oil companies, or selling Primus stoves to Bedouins in the desert, its operations are intimately bound up with Western business.

CAT's construction contracts have been let, largely, by the international

oil companies—or by local governments whose main source of income is from oil revenues. Its trading is largely in Western-made manufactured goods distributed in 12 Arab lands.

If relations between the West and the Arab world should deteriorate further, it could spell disaster for CAT. A Suez blockage, for example, would limit the movement of oil to the West, curtail the operations of Middle East oil companies, and shrink the profits Iraqi and Persian Gulf clients of CAT collect from the oil companies. And if other Arab states were to move toward more trade with the Russians—as Egypt already has done—CAT's marketing operations would suffer.

• **... And Principles**—CAT's ties with the West go even further than this direct dependence on oil revenues and Western manufactured products. More than any other locally owned under-

taking, CAT represents the principles of Western business in the Middle East scene. In an area where intrigue and corruption are considered normal to business operations, CAT has generally managed to keep its skirts clean. Bustani's CAT has built up a fabulous business by providing efficiency and quality.

That's not to say that Bustani hasn't played politics. He is a member of the Lebanese parliament, and an unofficial ambassador among the Arab governments. He is a fervent Arab nationalist. For a businessman in an area torn by so much enmity and suspicion, he is outspoken. (Earlier this year he was booted out of the Lebanese cabinet for talking plainly.) His critics are numerous: Some of his Christian Lebanese countrymen charge that he is an advocate of pan-Arabism at the expense of his own country. Some Arab Moslem

HOW TO UNCAP THE BILLION DOLLAR SOFT DRINK MARKET

Did you know that the billion dollar soft drink bottling industry is constantly looking for new machines, supplies and services to help cut costs and increase production and profits?

If you haven't yet explored the tremendous buying potential of the soft drink bottling industry, *plan now to attend the*

**30th ANNUAL SOFT DRINK INDUSTRY EXPOSITION,
November 12-15, in Cleveland, Ohio.**

This show is the biggest event of the year for the nation's 5,400 soft drink bottlers, held in conjunction with the annual convention of the industry's national association—American Bottlers of Carbonated Beverages. It's their once-a-year opportunity to see and compare newest developments in the field of machines, supplies and services to help cut costs, improve production, and increase profits.

And it's YOUR once-a-year opportunity to see and be seen, by those who make or influence buying decisions.

Your product or service might easily play an important role in the fabulous tomorrow of an industry which already has an investment of over a billion dollars, and employs 100,000 people.

For complete information about booth space, or for complimentary admission tickets, write: "SOFT DRINK EXPOSITION"

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fanatics have called him a "British spy."

• **Wide Influence**—Still, somehow, Bustani has managed to bridge the gaps between Middle Eastern points of view. Today he's the welcome confidant of Egypt's Pres. Nasser and Iraq's Premier Nuri es-Said—the two poles of Arab political thought. And in London, as some British diplomats complain, his opinion often carries more weight than do Whitehall's emissaries in the area.

I. How the Business Grew

Bustani's story is pure Horatio Alger. Today his palatial villa overlooking Beirut and the Mediterranean is a far cry from his humble origins. He was born 47 years ago into a poor, Maronite family. (The Maronites are Lebanese Christian Arabs who accept Rome's vicarship but have their own church ritual.)

• **American Education**—Energetic and ambitious, Bustani managed to put himself through the American University of Beirut. Then a scholarship and help from some Lebanese friends made it possible for him to come to M.I.T. (B.S., 1933).

Soon after he returned to the Middle East, Bustani quit Lebanon where his activities as a nationalist agitator got him into difficulties with the French mandate government. He went to neighboring Palestine, a British mandate, and began working for Iraq Petroleum Co. at its Haifa refineries.

• **Small Beginning**—CAT was born in Palestine in 1938. Bustani and another partner began handling small contracting jobs. Building a \$200 bath for an I.P.C. employee—Bustani pawned a gold ring to get some capital—was CAT's first contract. Soon contracts from the British army and I.P.C. followed.

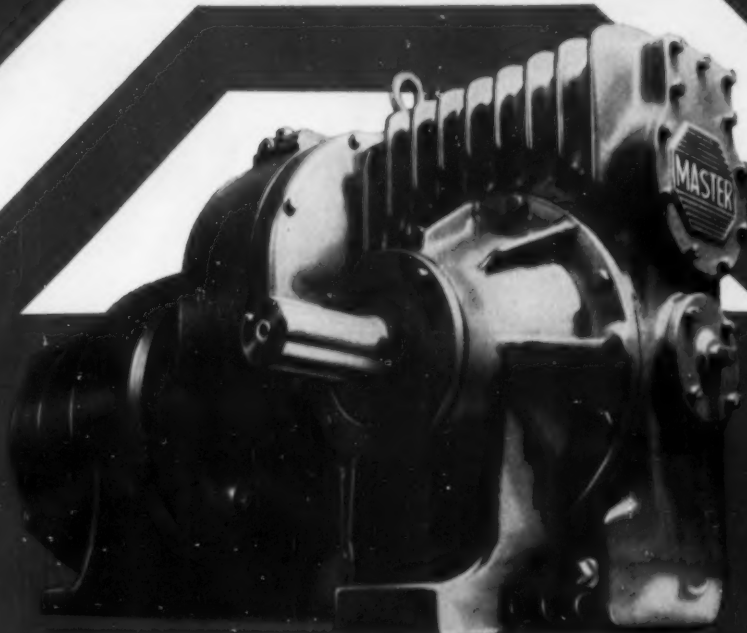
At about the same time that Bustani was getting started in Palestine, two other partners-to-be were starting on their own in Syria and Lebanon. Shukri Shammass had given up a teaching job to undertake local construction contracting for the French army in the Levant. And Abdulla Khoury was expanding a small trading operation that by 1939 extended through the two French mandates and into Palestine. Like Bustani, both young men were ex-IPC employees, both were Christians. (Similar religious background of the three made cooperation among them easier, although it has posed problems for them since they operate in a predominantly Moslem world.)

• **Partnership**—When Lebanon and Syria came under Vichyite control in 1940, the British army marched north out of Palestine to take over the two French mandates. As the British turned over local government reins to the nationalist forces, the three young

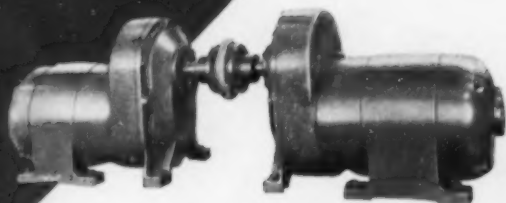


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Master Gearmotors have given more millions of hours of satisfactory service in the field than all other makes combined.



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MAINTAINS
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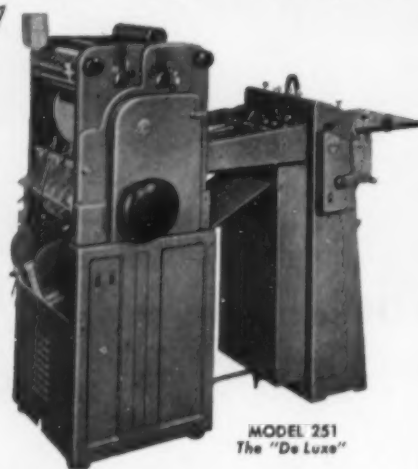


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KUWAIT SHEIKS are among the many influential friends Bustani has in Middle East.

men met at Homs, Syria, and in 1941 formed a partnership.

Success came quickly for the new company. Contracts from the British army continued to roll in. Khoury's trading section of the outfit blossomed as Allied expenditures poured money into the area. I.P.C. gave the company a contract to dig the trench for a 16-in. pipeline to expand the facilities between Iraqi oilfields and Haifa. CAT built fortifications, roads, a small airport, and camps for the British army.

But the end of the war in 1945 changed the whole picture. Army spending halted and the three partners were thrown back on the meager resources of the area. Furthermore, the establishment of Israel in 1948 ended CAT's operations there.

• **Building a Reputation**—I.P.C. came to CAT's rescue. I.P.C., racing to build a new pipeline to Banias, Syria, to replace the Haifa line that the Arab-Israeli war had cut off, gave CAT another trench contract. It was in the construction of the Banias pipeline that CAT made its reputation. Bustani did more than live up to his contract's promised deadline—something unheard of in the Middle East. Bustani's men completed the project ahead of schedule, earned a \$280,000 bonus.

From its projects in the Levant, CAT moved on to the Arab world's backyard, the Persian Gulf sheikdoms. The Iranian oil crisis of 1951—which pointed up the value of the Persian Gulf oil reserves—was a filip for CAT. In Kuwait, the Kuwait Oil Co. (BW—Aug. 18 '56, p. 171) awarded CAT contracts to build degassing stations and cargo jetties, to erect oil tanks, to install air conditioning, and to construct housing and offices for the company. Other contracts have been completed for most of the Middle East oil companies. And CAT is now operating as far afield as Pakistan.

• **Government Contracts**—But the oil companies weren't the only source of



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Strapping transmissions saves money, speeds handling**

ACME STEEL STRAPPING helped Fuller Manufacturing Company, Kalamazoo, Michigan, eliminate costly crating and slow manual handling. Now, two transmissions are steel strapped to a wooden skid, with protective top frame. This is accomplished in half the time previously required for the crating operation by the same crew. (Idea No. U6-6)

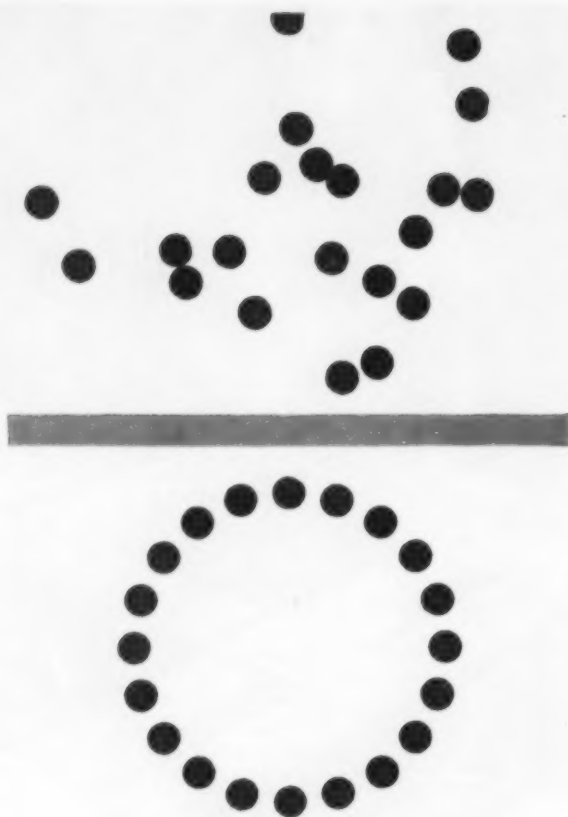
The steel strapped skid loads are moved by lift-truck, can be stacked six high. Appreciable saving in material cost and storage space are realized. And, damage in transit is reduced.

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olivetti



BUSTANI, handling relief after Lebanon's 1955 earthquake, inspected damaged houses.

CAT's construction contracts. CAT received orders to build irrigation projects from the Iraq Development Board—the government outfit that is spending 70% of Baghdad's oil revenues on long-term economic projects (BW—Apr. 2 '55, p. 100). The shiekdom of Kuwait awarded CAT contracts for building a university town, erecting water reservoirs, and as consultants to the Kuwait Development Board. CAT has played a big part in Beirut's recent spectacular building boom. And CAT built Britain's new jet base at Amman, Jordan.

• **Alliance**—It was largely Bustani's salesmanship that lined up these construction jobs. But he had his eye on more complex construction. In 1952, CAT signed an agreement with Motherwell Engineering Co., Ltd., a Scottish company. Together the two companies formed Mothercat, a joint construction company with headquarters at Tripoli, Lebanon. British-managed, Mothercat has the technical personnel to snag more complex construction contracts than CAT has been able to get.

Lebanon's free economy and loose corporate accounting laws make CAT's secrets all its own. Its reported capital of \$8.4-million is probably no indication of its real resources. All told, the company has secured well over \$100-million worth of construction jobs since it was formed in 1938. CAT's trading empire—spread through Syria, Lebanon, Jordan, Iraq, Kuwait, Qatar, Bahrain, Aden, Saudi Arabia, and with extensions, to Egypt, and Libya—is a smaller part of the business. Most of its products—with the big exception of cement—have to be imported from the West.

• **Managing the Business**—The three

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This is the sixth of a series describing the area served by United Gas. Map shows United Gas pipe lines in a portion of Southeast Texas.

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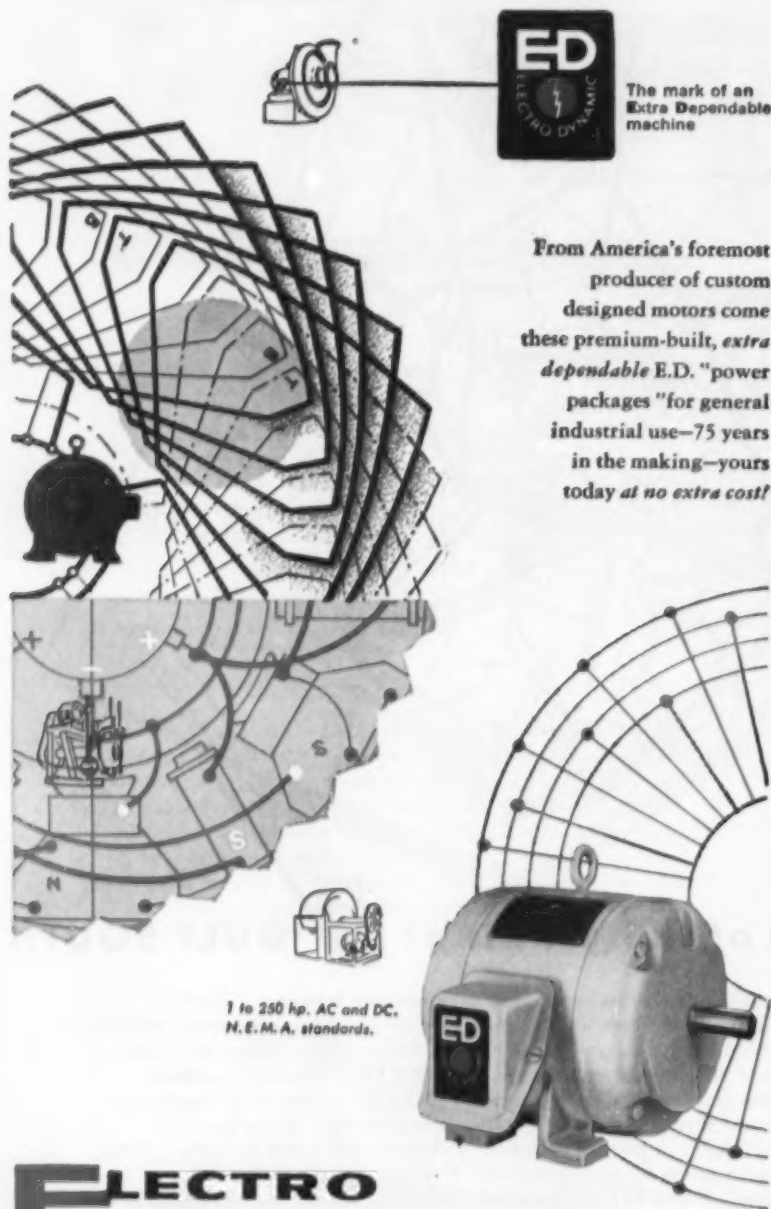
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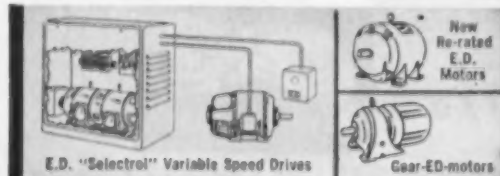


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partners divide up the management chores. Bustani is chairman, Khoury is managing director (president in U.S. terms), and Shammas is general manager. Bustani and Shammas handle all the contracting. Khoury still handles the trading aspects of the company. In addition, as CAT's representative, Bustani sits on the board of the Arab Bank, and, with his partners, on the board of Mothercat; is a participant in a joint insurance company with Swiss interests; and is setting up a plant-for-hire company with German interests.

II. The King Pin

There is no doubt that Bustani is the dynamo of the company. One important reason: He has the political influence that a Middle East contracting company couldn't exist without.

• **Political Role**—Bustani is active in Lebanese politics—rumored to be a candidate for president in 1964 if not in 1958. (As a Christian, he has an advantage since Lebanese political offices are carefully apportioned between its half-Christian and half-Moslem population. The presidency is "reserved" for a Christian, the premiership for a Moslem.)

When Bustani jaunts across the Arab world in one of CAT's small fleet of airplanes, he is usually on a joint political-business undertaking. Sometimes he is accompanied by a bevy of British MPs or businessmen on a tour of Arab capitals. They know that a scribbled note from Bustani to a sheik or a prime minister is better than an introduction to Arab big-wigs from Whitehall.

Cigar-smoking, big-living, and fun-loving, Bustani is at home with Westerners. Western businessmen and diplomats respect his business-like manner that gets at the root of the problems. They admire, for example, the efficient way he handled emergency relief after the Lebanese earthquake last year.

• **Bustani's Heritage**—Of course, more than anything else, Bustani is a Lebanese. Fenced in between the Arab nationalists' enemy, Israel, on the south, and a rambunctious Syria on the north, the Lebanese walk a tight-rope. The country's soil is poor, its industry primitive. Yet it is relatively prosperous compared with other Arab states. That's because the many Lebanese who live outside the country send remittances to the folks back home. Traditionally, Lebanese merchants have been notably successful wherever they go.

That's Bustani's heritage. But he's gone far beyond it. However, whether CAT's progress can continue under Bustani's prodding may now depend on the outcome of the Middle East political situation.

• **Optimistic Outlook**—This week as he rode to his office in his air-conditioned limousine, Bustani was full of his



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NOWHERE else in the world does the businessman, the farmer, the consumer enjoy the kinds and quality of transportation service available here in the United States.

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Now, some would like to throw the emphasis on virtually unrestricted *rate* competition. We tried unrestricted rate competition once before — and it nearly wrecked our developing country. Now we have vigorous price competition, to be sure, but with built-in safeguards to protect shippers, carriers, and public alike.

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usual optimism. He believes there will be no war over Suez, that the West and Nasser can come to terms.

"Nasser is a mirror reflecting Arab nationalist aspirations," he says. "Nasser—and the Arabs—are willing to come to a long-term agreement over the entire range of problems. We need the West. . . .

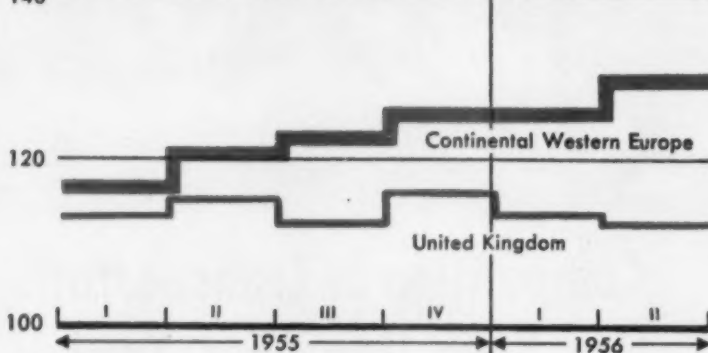
"But if the West blunders, I'll be the first to criticize because the [Arab]

moderates and friends of the West are the first to suffer. . . . It's surprising that after so many Western blunders, pro-Western moderates like me are still in business."

Arab nationalism, Bustani concluded, is not a danger to the West. He says that an agreement with the West will topple anti-Western demagogues—who then will be accused of being Communist agents.

Boom Runs Strong on Continent, As Suez Raises...

Total Industrial Production, 1953 = 100



Data: Economic Commission for Europe.

Inflation Fears in Europe

Western Europe recovered last week from the Suez jitters. By putting the canal conflict on ice for a while, the second London conference removed not only the fear of war, but also the fear of a sudden costly boycott—one that would send many prices skyrocketing.

Still, there is no blinking the fact that the Suez conflict has added to inflationary pressures across the Atlantic and will continue to do so as long as it remains unsettled. The trouble is that even before Suez the boom on the Continent had reached the point where it had begun to threaten a runaway cost inflation in some countries. And in Britain, where the boom had been damped down by early this year, the economy had not fully recovered from its bout with inflation.

• **Pressure on Costs**—The immediate effect of Suez has been further pressure toward higher costs. There has been an increase in freight and insurance rates that has raised shipping costs considerably. Commodity prices also are up, though they dropped from the level of several weeks ago when military action seemed likely. Then there is the psychological impact of prices on businessmen and consumers who had begun

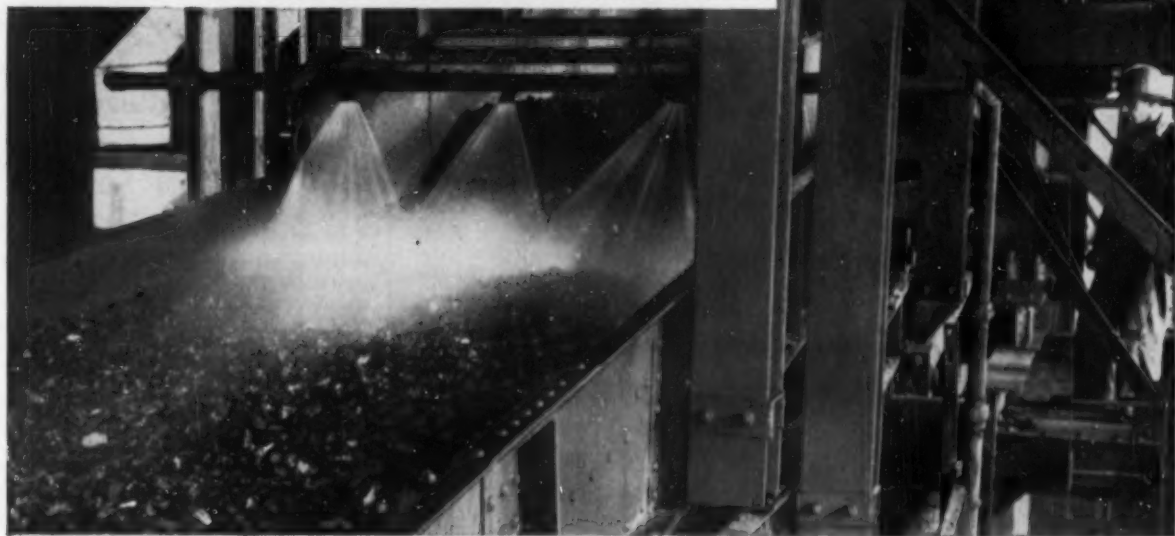
to sniff an inflationary breeze before Suez. This is something that worried European economists regard as the most significant immediate effect of the Suez conflict.

If the crisis gets no worse and both oil and commodity shipments continue to get through the canal, Britain probably will come off more lightly than most of the Continental countries, certainly more lightly than France. West Germany is the one big country in a position to ride out the storm with relative ease. But no European country will escape completely. And European economists, especially at the Organization for European Economic Cooperation, are worried enough to be taking soundings on Europe's ability to cope with the new inflationary strain.

• **Economic Climate**—To understand why the OEEC experts feel that Suez comes at a bad time, you have to look first at the over-all economic climate and then at the special problems of the big countries.

For the past three years the European economy has been going great guns. The combined gross national product of the OEEC countries has risen by 15%, total industrial production by

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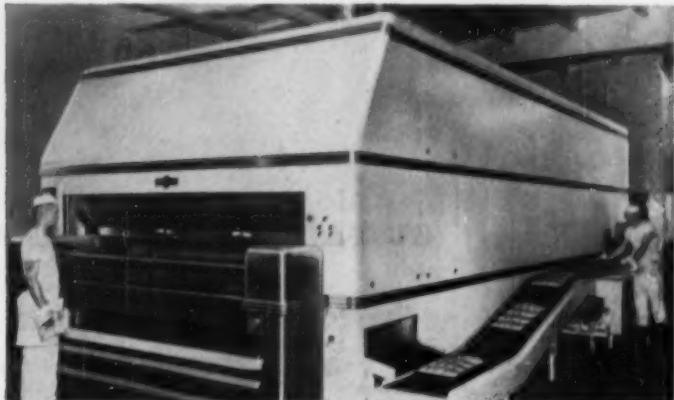


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"... a Suez shutdown would certainly upset the price-cost structure in British industry ..."

STORY starts on p. 96

25%. Until early this year wages were increasing, except in Britain, in an atmosphere of relatively stable prices. It would have been strange, say OEEC experts, if pressures had not developed under such a relatively fast expansion of the European economy.

• **Situation in Britain**—Fortunately for Britain, with its delicate balance between home consumption and exports, the Suez crisis came a year after the peak of that country's inflation. By midyear, the anti-inflationary measures of Chancellor of the Exchequer Harold Macmillan had turned the 1955 trade deficit into a trade surplus, and boosted Britain's gold reserves considerably above the danger line. Fortunately also, Britain stands to gain as much as it loses from increased prices for shipping and commodities.

Even so, the Suez crisis is threatening the recovery program that Macmillan had only half completed. Wage claims are pending that could send up production costs. A Suez shutdown would certainly upset the price-cost structure in British industry, set off a new inflationary spiral.

• **France's Problem**—If Britain's position is precarious, France's is downright dangerous. Pressures began building up in the French economy early this year as domestic demand—both for investment and consumption—began to repeat the pattern experienced by Britain in 1954-1955. The danger of inflation was only recognized officially this summer, when the government imposed a mild dose of anti-inflationary measures, including restrictions on consumer credit. Now the government is threatened with a new wage drive that could force even higher production costs. At the same time, French exports have been falling off and the country's gold reserves dwindling at an alarming rate—on much the same pattern as Britain experienced in 1955.

Apparently the French government had been counting on an expanding economy eventually to soak up inflated demand. France alone in Europe has been showing production increases equal to those in West Germany. (Output this year should beat last year's record.) Savings, as well as private investment, have been setting postwar records.

• **Harmful Factors**—Now it's clear that other factors have weighed so heavily on the economy that the government's op-

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How to Teach an Old Truck

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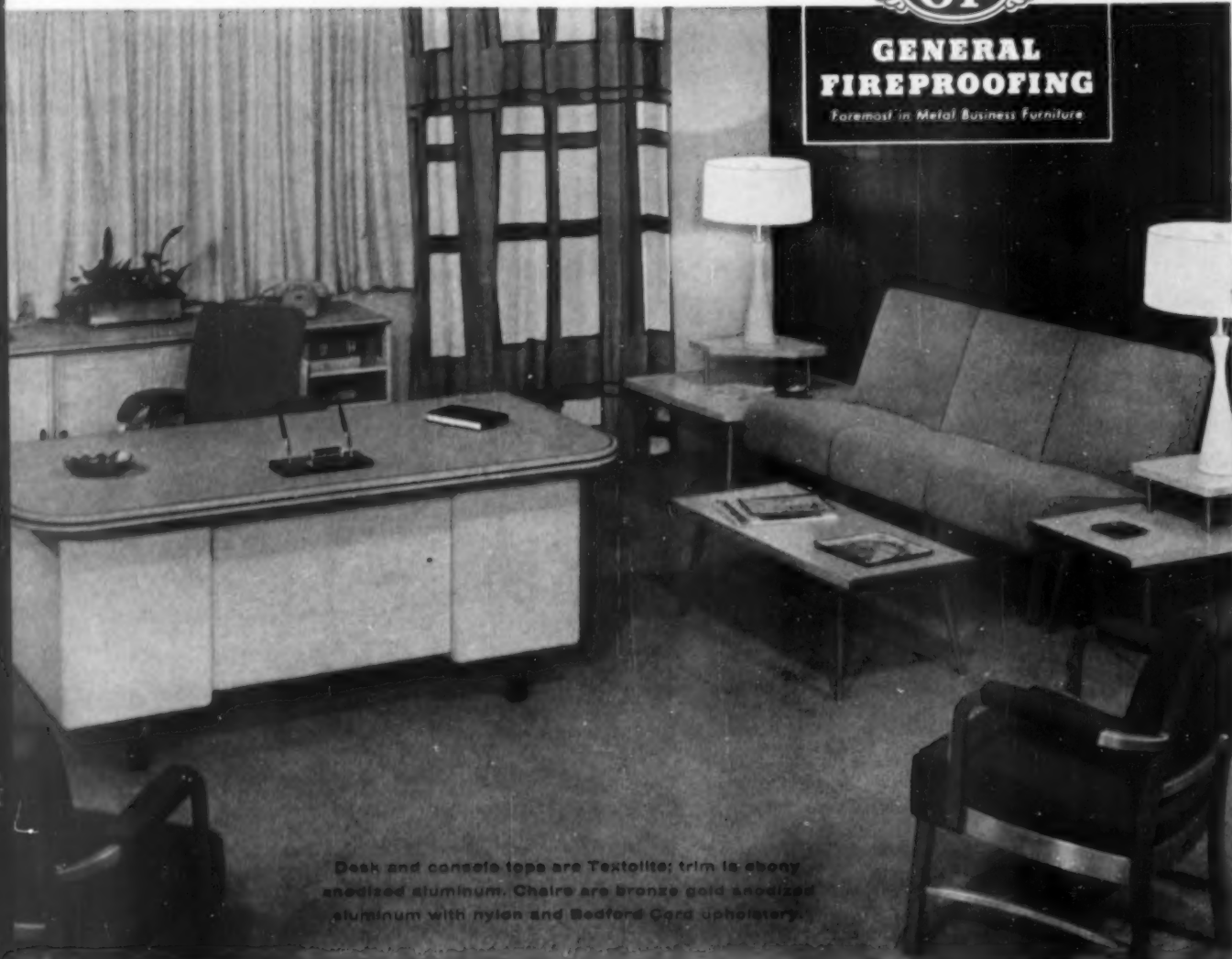
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For complete information and the address of the nearest showroom where you can see the "Logan" set up, write today to The General Fireproofing Co., Dept. B-70, Youngstown 1, Ohio.

GF metal business furniture is a GOOD investment

timistic assumptions have been proved wrong. Bad weather last winter has pushed up food prices at least 10%. The Algerian campaign has drained off manpower and diverted financial resources. The government's social program of old age pensions and three-week paid vacations has added to industry costs. Wages this year already are running ahead of production. All this, and Suez too, indicates that France is in for a stiff dose of anti-inflation medicine. It also indicates that the Mollet government is heading for real political difficulties when the National Assembly reconvenes in early October.

• **Boom in West Germany**—West Germany's boom, like France's, has been sparked by a rapid increase in domestic demand. Private consumption, especially of durables, seems to be the generating force this year even more so than industrial investment. A still-growing demand for German exports has played an important part, too.

With exports still booming after six years of steady expansion, Bonn has no payments problem at all. In fact, its surpluses are a constant embarrassment to other European countries.

• **Growing Threat**—Until recently, the Adenauer government has managed this double boom without any real threat of inflation. Prices have increased only moderately over the past few years. However, this picture may change in the near future. Wages have been rising so fast recently that prices are bound to feel the effect before long. It's clear that wages have now outstripped the rate of growth of productivity—something that hasn't happened before in postwar Germany (average hourly earnings rose by about 4% in the second half of 1955 and by about 10% in the first half of this year).

It's the fact that West Germany is tottering on the edge of inflation that explains Bonn's reluctance to back a tough policy on Suez (BW—Sept. 22 '56, p. 23). As the West Germans see it, a Suez boycott would have an even more inflationary impact on their economy than Korea did.

• **Long-Range Effects**—The long-range economic effects of the Suez conflict are more difficult to appraise, even if you assume that there will be some kind of compromise settlement. But it's reasonable to speculate that the European attitude toward its future energy needs will probably be different. Suez has dramatically shown how dependent Western Europe is on a distant and unreliable source of energy. As yet there are no plans in any European country for a crash program to develop atomic energy. Nonetheless, you can be sure that all the national atomic programs, plus joint projects such as Euratom, will get a better hearing in the future. **END**



WALTER HOLMS, Project Engineer, with Dexter Folder Company's Cleveland folding machine. The Bristol multiple-spline socket screws he's holding may be loosened and tightened up to 1,000 times during life of machine.

"Not one socket failure in 30 years!"

That's the report we get on Bristol Multiple-Spline socket screws used in the Cleveland Folding Machine made by Dexter Folder Company, Pearl River, N. Y.

Here's what Walter Holms, Project Engineer for Dexter Folder Company says: *"During over 30 years of usage of various multiple-spline socket screws on our Cleveland Folding Machine, we've never had a socket failure or burred shaft caused by a tightened screw. These Bristol screws are set and loosened as many as 1,000 times during the machine's life, yet I have never heard of a Bristol multiple-spline socket rounding out . . . over 20,000 Cleveland Folding Machines are equipped with them."*

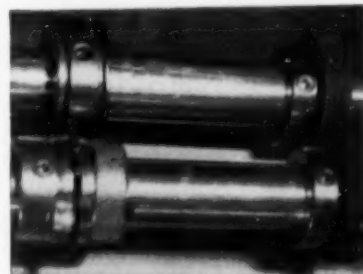
This truly outstanding performance is no surprise to Bristol engineers, who designed the multiple-spline screw. They knew the multiple-spline socket was the best way to transmit the wrench's motion to the shaft. The multiple-spline screw can be tightened tighter, and many more times, than ordinary screws.

Bristol, of course, makes precision hex-socket screws, too—the industry standard—for less critical applications. Same price for either hex or multiple-

spline, by the way.

And, speaking of what Bristol makes, our automatic controlling, recording and telemetering instruments have found industry-wide acceptance. And Bristol choppers, high-speed relays, and aircraft pressure-operated devices are making navigation and missile guidance easier for commercial and military aviation.

Write for complete information on any Bristol product. The Bristol Company, 164 Bristol Road, Waterbury 20, Conn.



DETAIL OF CLEVELAND FOLDING MACHINE
Socket set screws hold knife blades and perforator rollers tight, yet can easily be loosened for adjustments.

A-6-21

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CHOPPERS AND HIGH-SPEED RELAYS • AIRCRAFT PRESSURE-OPERATED DEVICES



The first of a new aircraft type— the Martin SeaMaster depends on Cherry Rivets for quality fastening

The U. S. Navy's first multi-jet attack seaplane, the Martin XP6M-1 SeaMaster, gives military strategy a flexibility and mobility never before possible with military aircraft. It has global range, is capable of speeds over 600 miles per hour and will cruise normally at 40,000 feet. The plane is as big as a commercial airliner, yet it can operate from the seaways, lakes and rivers of the world, on extended periods of duty and still be independent of fixed bases. Its two primary missions are mine laying and photo-reconnaissance.

In designing the big, sweeping flying boat, Martin engineers knew they could depend upon the high quality of Cherry Blind Rivets to provide uniformly good fastening in many intricate places. Their confidence is not misplaced, for Cherry engineers long ago accepted the responsibility of producing the best and widest range of blind fasteners for

the aircraft industry.

The attainment of this goal is possible because a continuous quality control program is in effect in the Santa Ana plant which is devoted exclusively to making aircraft products. Every operation, from the inspection of raw material, tools, dies and gages—through machine maintenance, final line inspection and testing, is designed to provide a uniform operation of Cherry Rivets under a variety of applications.

Cherry engineers also have pioneered in developing new and better tools for installing Cherry Rivets which is a service provided to enable aircraft companies to attain more efficient production and lower unit costs.

These are but a few of the reasons why Cherry Rivets are standard in many aircraft plants. For complete information, write Townsend Company, Cherry Rivet Division, P.O. Box 2157-A, Santa Ana, California.

CHERRY RIVET DIVISION

SANTA ANA, CALIFORNIA

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Just Getting By

Khrushchev falls far short of harvest goal, but not quite so far that he will be hurt politically.

Communist Party boss Nikita Khrushchev planned to have 1956 mark a dramatic turning point in the gloomy history of Soviet agriculture. He figured that huge farm investments and a new agriculture price policy plus 70-million acres of virgin land would produce a stupendous grain harvest this year—as much as 140-million tons, or about 40% more than any previous year. This would give the Russian people plenty of bread, Soviet livestock plenty of fodder, and still leave a lot of grain for export and for state reserves.

• **Poor Weather**—Now that the results of the 1956 "grain battle" are about in, it's clear that the Khrushchev plan has fallen far short of his goal—but not far enough to threaten his political position. It was this year's cold and rainy harvest time plus organizational foul-ups that destroyed Khrushchev's hopes for harvesting the bumper crop that stood on the fields of the USSR early this summer. The results add up this way:

• The harvest will run between 110-million to 115-million tons, from which the state will take 57-million tons for the cities, exports, and reserves. That's about 40% more than the government got in "marketable supplies" from the relatively good harvest of 1952 (the latest year for which such figures are available).

• The collective farm peasants will pay the heaviest price for the bad weather. They'll get a smaller proportion of the total crop than they usually get for their own needs and the needs of the livestock they keep on their private plots.

• Especially bad weather hit the virgin lands of Kazakhstan and Siberia for a second year—this time late summer rains rather than last year's early summer drought. Despite desperate, last minute efforts, much of the field crop in this area is lost. Another bad year on the new lands and this costly experiment may look like a failure.

Khrushchev's ability to get 57-million tons of grain for the state is the thing that will help him politically. This is about the figure he fixed late in 1953, at the time of his rivalry with Malenkov, as a minimum target for 1955 or 1956.

• **Pressure**—Khrushchev achieved this much success by:

(1) Ordering the Machine Tractor Stations, which now control the col-

Now, trains shower-up in minutes, too!

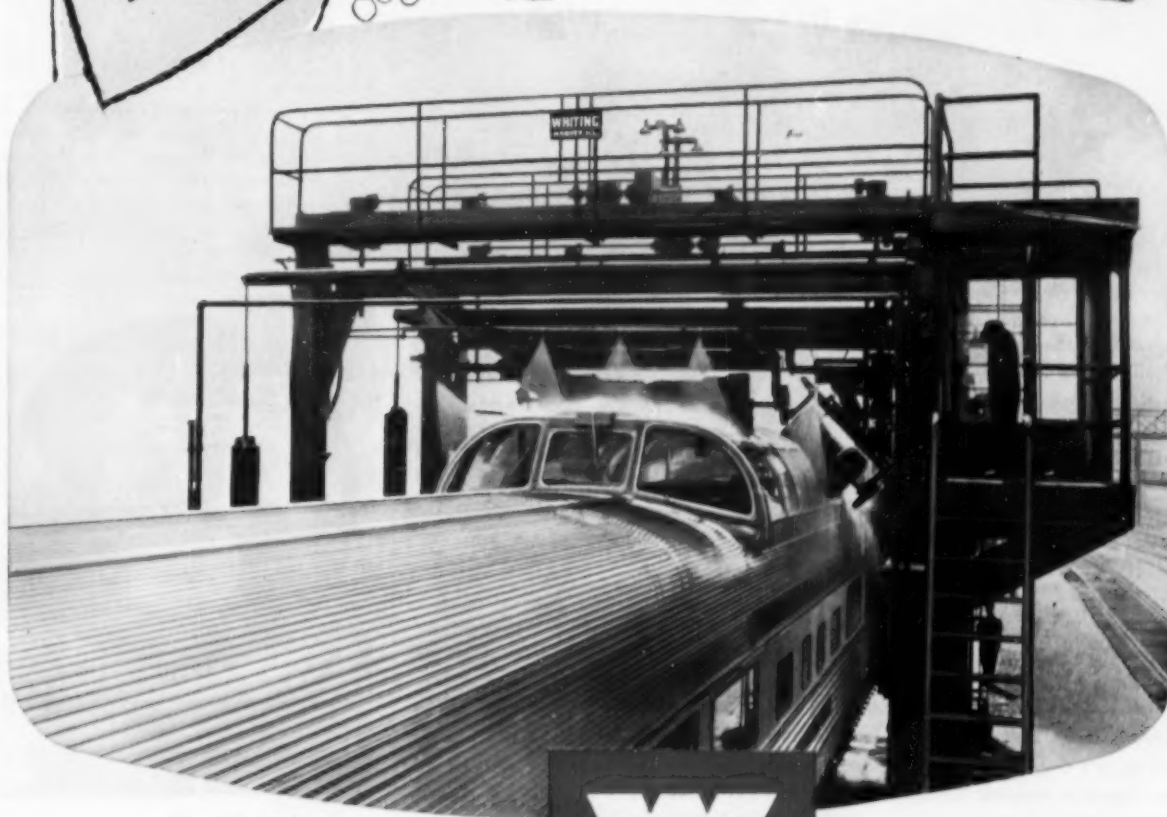


Yes, in just about the same time as you can take a shower, an entire train can be washed clean and bright. At the terminal or on the run one operator and a Whiting Train Washer do the job in minutes. Cars may pass through this washer at the rate of 70 feet per minute... an ordinarily hard-to-clean dome type car in as little as 75 seconds.

Solution spraying, brushing, final washing and rinsing, the complete cleaning operation, is easily controlled by the operator from his station. Dirt and grime are removed without injury to car finish by soft, long-life brushes. Brush holders, held automatically against the car sides, have an exclusive self-aligning mechanism to compensate for car tilt. Sectional brush design makes possible various arrangements to handle special shapes, such as indented windows.

Save train washing time and cost! Consult Whiting about the many advantages of the Whiting Train Washer! Write today for Bulletin CW-C-409.

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Drop Tables • Electric Portable Jacks • Cross-Over
Bridges • Trambeam Overhead Handling Systems
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BROADCASTING TUBES

Keep TV Station Warm in the Winter

A unique ventilation system cools the electronic tubes in amplifier units at Station WTVN-TV, Columbus, Ohio, in the summer and uses heat generated by the tubes to warm the building in the winter.

ILG ventilating equipment was selected to do the job. William Hansher, Chief Engineer of WTVN, Ivan Roshon, Graybar Sales-Engineer, and Sherman Heath, ILG Representative teamed-up to design the installation.

During the Spring and Summer months the heat is exhausted to the outside atmosphere by ILG blowers. In colder weather the ventilation equipment shown in the photo is turned off. The heat is distributed to keep four rooms comfortably warm. Seventeen additional ILG units located throughout the building are employed in a like manner.

Helping to find solutions to both unusual problems and those of an everyday nature is typical Graybar service. And it's not restricted to ventilation. For Graybar is an all-inclusive source of everything electrical. Over 100,000 electrical items for wiring, lighting, communication, ventilation and power are available from a network of Graybar offices and warehouses located in over 130 principal cities. And in every field there's a staff of Graybar Specialists ready to serve you whenever you require their expert assistance.

GRAYBAR ELECTRIC COMPANY, INC.
420 Lexington Avenue, New York 17, N. Y.

CALL GRAYBAR FIRST FOR...



OPERATION COOPERATION. The product of a joint customer-supplier effort in this unusual ventilating system shown being inspected by the ILG Representative, Columbus, Ohio and the local Graybar Representative (right).

"... Khrushchev will need the extra grain he has managed to add to the state share ..."

STORY starts on p. 104

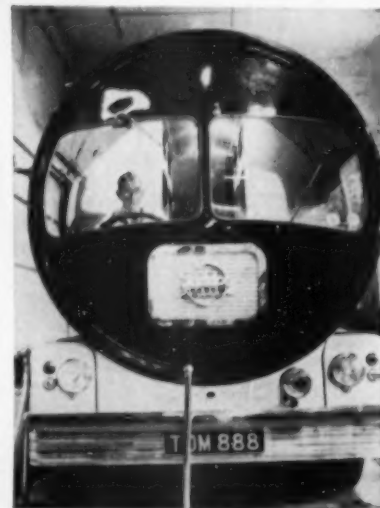
lective farms, to deliver the harvested grain to the state granaries first;

(2) Sending hundreds of thousands of urban Communists to the collective farms to help with the harvesting—and to prevent the collective farmers from harvesting their share rather than that of the state;

(3) Developing the virgin lands largely by state farms rather than collectives, thus guaranteeing that the state automatically gets the bulk of the grain from these lands.

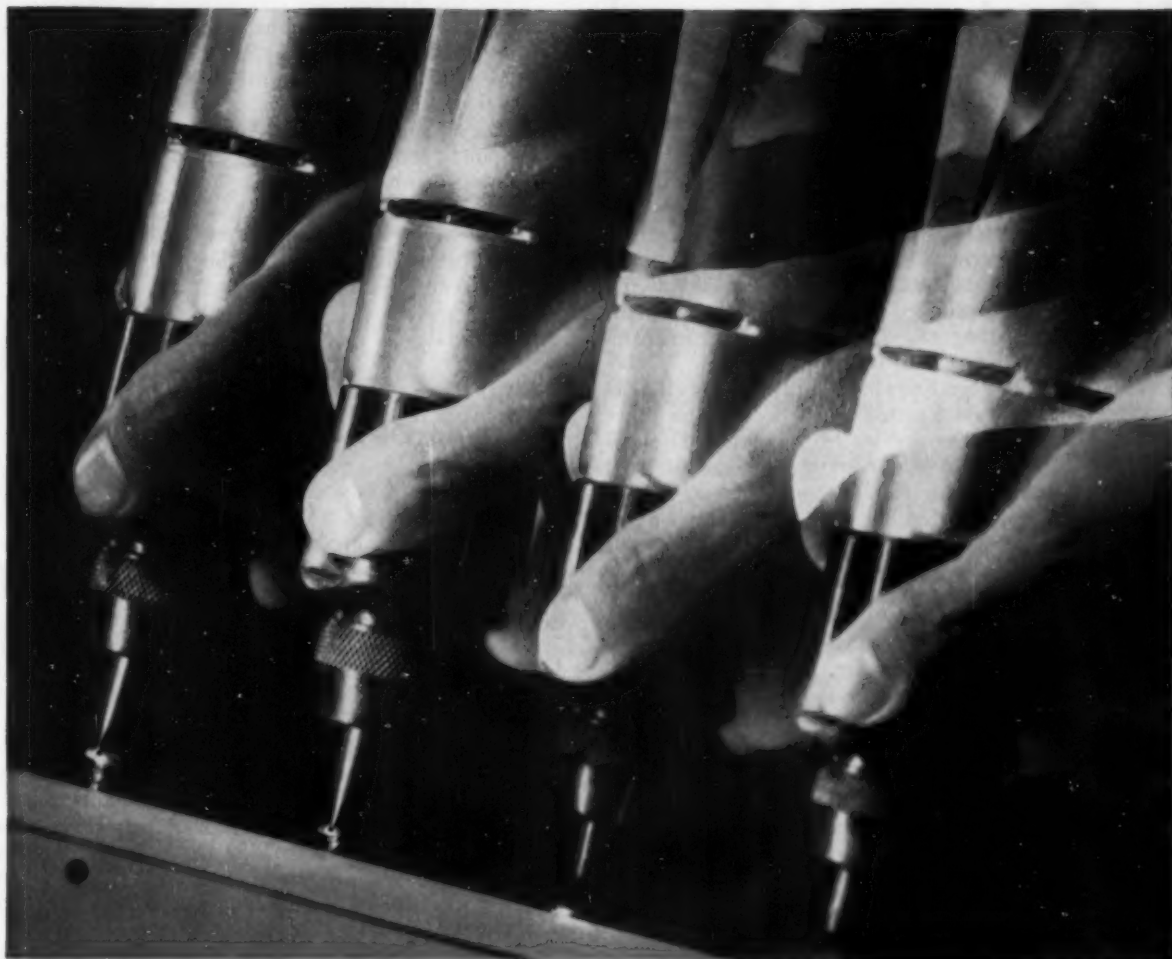
There is no doubt that Khrushchev will need the extra grain he has managed to add to the state share. Soviet commitments to Eastern Europe will go up by at least 1-million tons (to between 4-million and 5-million tons) this winter. Poland has just had a very bad grain crop, and Yugoslavia is asking for about 1-million tons, which Tito previously got from the U.S. On top of that Moscow is supplying Egypt with grain.

Some of the East European deficit may be filled by grain purchases from Canada as it was last year. But this can only be done at the expense of Soviet bloc's hard currency reserve. Polish and Russian trade missions are active in Canada right now.



Tubular Truck

This unusual design of tubular body for a truck was shown recently at the Commercial Motor Show in London. It has a diesel engine built by Seddon Diesel Co. of England.



Is assembly one of your largest production costs?

It probably is. Wherever fastenings must be made, this simple truth applies: The cost of the fastener is but a tiny fraction of the cost of using that fastener in production. The key to reduced assembly costs is the fastener that helps high-paid assembly hands turn out better work—*faster*. The P-K® Self-tapping Screw is that fastener!

Using screws that don't come up to P-K standards can raise total assembly costs as much as 25%. Screw failures not only result in assembly slow-downs . . . but in parts spoilage and hidden weaknesses as well.

This is especially true in assembly by automation. Uniformity, such as P-K Self-tapping Screws offer, is automation's prime requirement for trouble-free assembly.

Why not talk to a Parker-Kalon Assembly Engineer—a man who is in daily contact with many different assembly set-ups. Perhaps he can show you how to reduce the number of fastenings in your product or how to solve a particularly difficult fastening problem. (That's his business.) Contact him through your local Parker-Kalon distributor.

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Manufacturers of Self-tapping Screws, Socket Screws, Screwnails, Masonry Nails,
Wing Nuts and Thumb Screws

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In Business Abroad

• • •

French Investors Vote Confidence

In Mollet—and a Sure 5% Return

Early one day last week the 68-year-old mayor of Decazeville, a sleepy village in the south of France, shuffled into the local post office, pulled out a battered change purse, and plunked down 10,000 francs (about \$28). After pocketing two 5,000-franc "Algerian Loan" bonds, he retired to a nearby cafe.

Thousands of other Frenchmen did likewise. By the weekend, Mayor Paul Ramadier—now wearing his other hat as Minister of Finance in the government headed by Socialist Premier Mollet—was able to call in Paris reporters to tell them that the loan was a success. During the first five days \$185-million came in. The government believes it can easily meet its \$420-million goal by Oct. 20, deadline for the bond drive.

The bond drive has been a vote of confidence in the government's policies. But it has also been more proof—if more were needed—that the French investor knows a bargain when he sees it.

The 15-year bonds, sold in four series in units from 5,000 francs up to 1-million, carry 5% interest. By contrast, the last big government loan in 1952 carried only 3.5%. Furthermore, the issue is bolstered by tax incentives, with bond values tied to a Paris stock exchange index insuring against depreciation.

About the only gripe that's heard comes from government-owned industry. Its managers are arguing they can't come into the market to get needed capital with the bond issue setting a difficult pace. And that, they say, means the nationalized industries will have to lean more heavily on government appropriations.

• • •

Soviet's \$100-Million Nudge

To Indonesia Puzzles West

Western observers still don't know quite what to make of the Soviet Union's latest feint in the war of "peaceful coexistence" in Southeast Asia. The Russians have signed a \$100-million credit for Indonesia. According to the announcement, Soviet experts will check into the possibilities of economic development—including hydroelectric, steel, mining, and atomic energy development.

That could mean the Russians are going all out to try to make inroads into the Indonesian economy—which until now has been firmly tied to the West. It would be a prize well worth having. Indonesia has the third largest population in the Orient—86-million. Its agricultural resources are vast, and its mineral wealth—virtually untapped and unknown—is also considered to be great.

The Russians have offered capital goods amounting to \$100-million in gold. Repayment is to be stretched over 12 years and is to be in sterling or in goods. The latter may be the catch.

While the Russians can undoubtedly use considerable quantities of Indonesian rubber, tin, copra,—and perhaps even oil for Soviet Asia—they can't but be aware of the present state of these industries in Indonesia. Large amounts of all exports are out of control of the government, being smuggled to markets in Singapore and the Philippines. Productivity has fallen so rapidly in recent years that—combined with smuggling—it has produced a foreign exchange crisis. It remains to be seen whether the government can marshal its exports for Soviet trading any better than it has in the past for traditional markets in the West.

• • •

Deere & Co. Takes Foreign Plunge, Buys West German Tractor Maker

Deere & Co., Chicago, has bought a majority interest in Heinrich Lanz, AG, West Germany's largest tractor manufacturer and implement maker. The purchase—some details of which are still to be ironed out—marks the first time Deere has gone into overseas manufacturing operations. But the company has been scouting around for opportunities to expand its foreign markets by overseas operations since World War II. It started into a project to build farm implements in Scotland but backed out in 1951, calling the plan unfeasible.

Pres. William A. Hewitt told stockholders last week that Deere's plans for Lanz aren't complete. **Guessing in the industry is that Deere will hang on to Lanz' name—an old and respected one.** The company has been operating in Germany since 1859 and has overseas sales setups, as well. German sources figure it has an "in" in the Eastern Zone and Soviet bloc markets if and when those areas open up.

Lanz was up for sale because of its heavy debts. It's been having a rough time competing against Massey-Harris-Ferguson and International Harvester, both of whom have moved in on the postwar German market.

• • •

Europe's Marketers Hold a Klatsch, Hope to Meet in Russia Next Year

How to pass marketing and distribution information back and forth across European boundaries will be the subject for a meeting next month in Milan. The National Sales Executives Board will sponsor the conference.

NSE has 16 clubs—with 2,000 members—in Europe. The Italian clubs are playing hosts for the get-together that is expected to include groups from 14 countries—including delegations from India and Japan.

The sessions will cover marketing and motivation research, sales forecasting, consumer credit, sales training, advertising, public relations, and distribution trends. Panels will include spokesmen from leading European businesses and industries.

Next year, the NSE International group hopes to hold a session in the Soviet Union. An invitation has already come from the Soviet Chamber of Commerce but details are still to be worked out.

\$76,000,000 for
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South Carolina Electric & Gas Company serves one of the fastest-growing areas of the United States. To meet the requirements of increased population and industry—including the Government's Atomic Energy Plant on the Savannah River—the Company has doubled its capacity since 1948.

To finance this large-scale expansion, the Company, through Kidder, Peabody & Co. as agent or manager of underwriting groups, raised \$76,000,000 by the sale of 18 different securities issues.

If you feel that our experience can benefit you, we would be pleased to act on your behalf.

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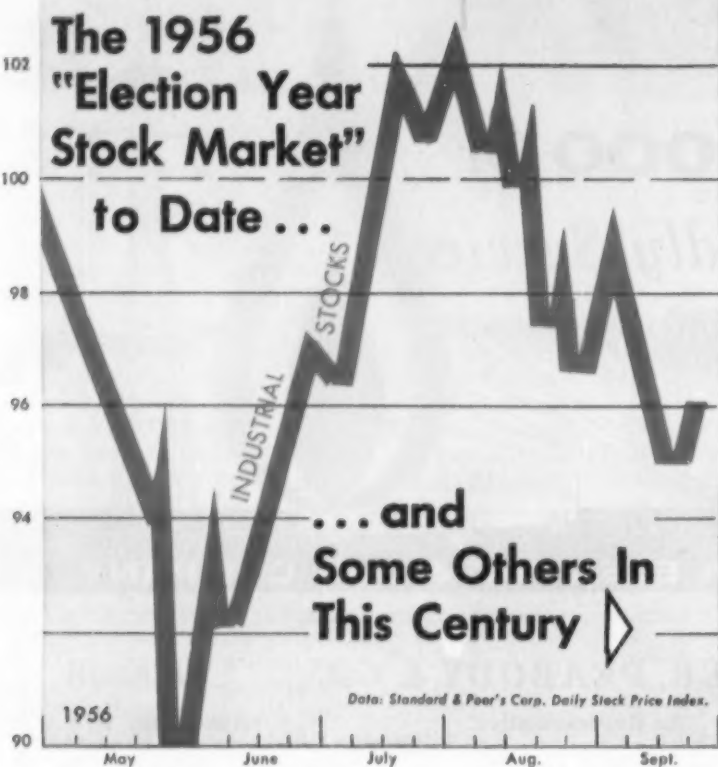
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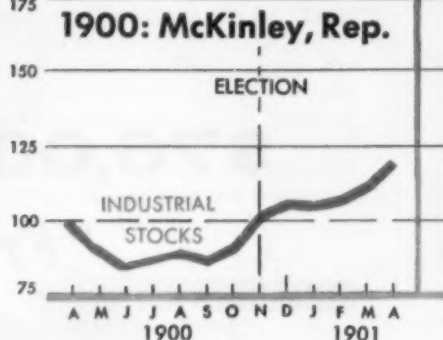
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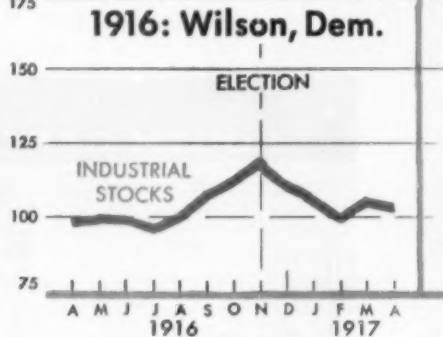
April 1900 = 100

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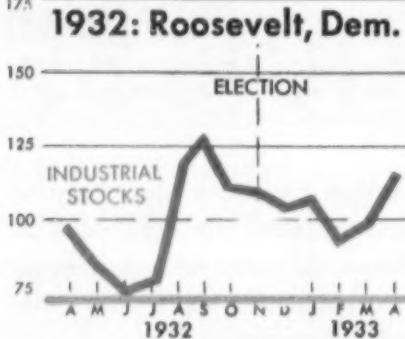
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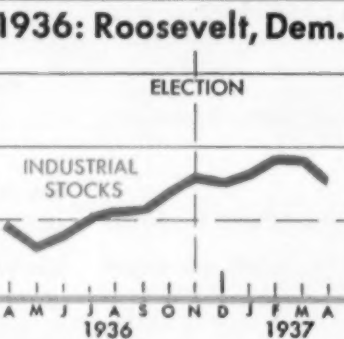
April 1932 = 100

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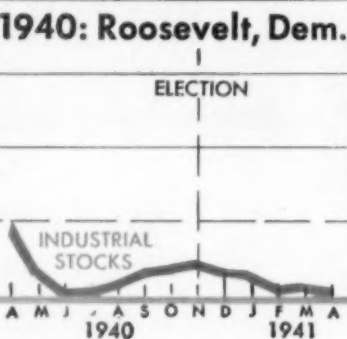
April 1936 = 100

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April 1940 = 100

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In Election Years, the Market

The sloppy meanderings of the 1956 election year stock market, depicted in the upper lefthand chart, may look like confirmation of the time-worn adage that Presidential elections always bring a business slowdown and sagging stock prices, especially if the Democrats won. But confirmation isn't there, for the excellent reason that the adage has had no truth in it for a good many years.

In the old days, of course, the adage carried truth as well as weight. Over

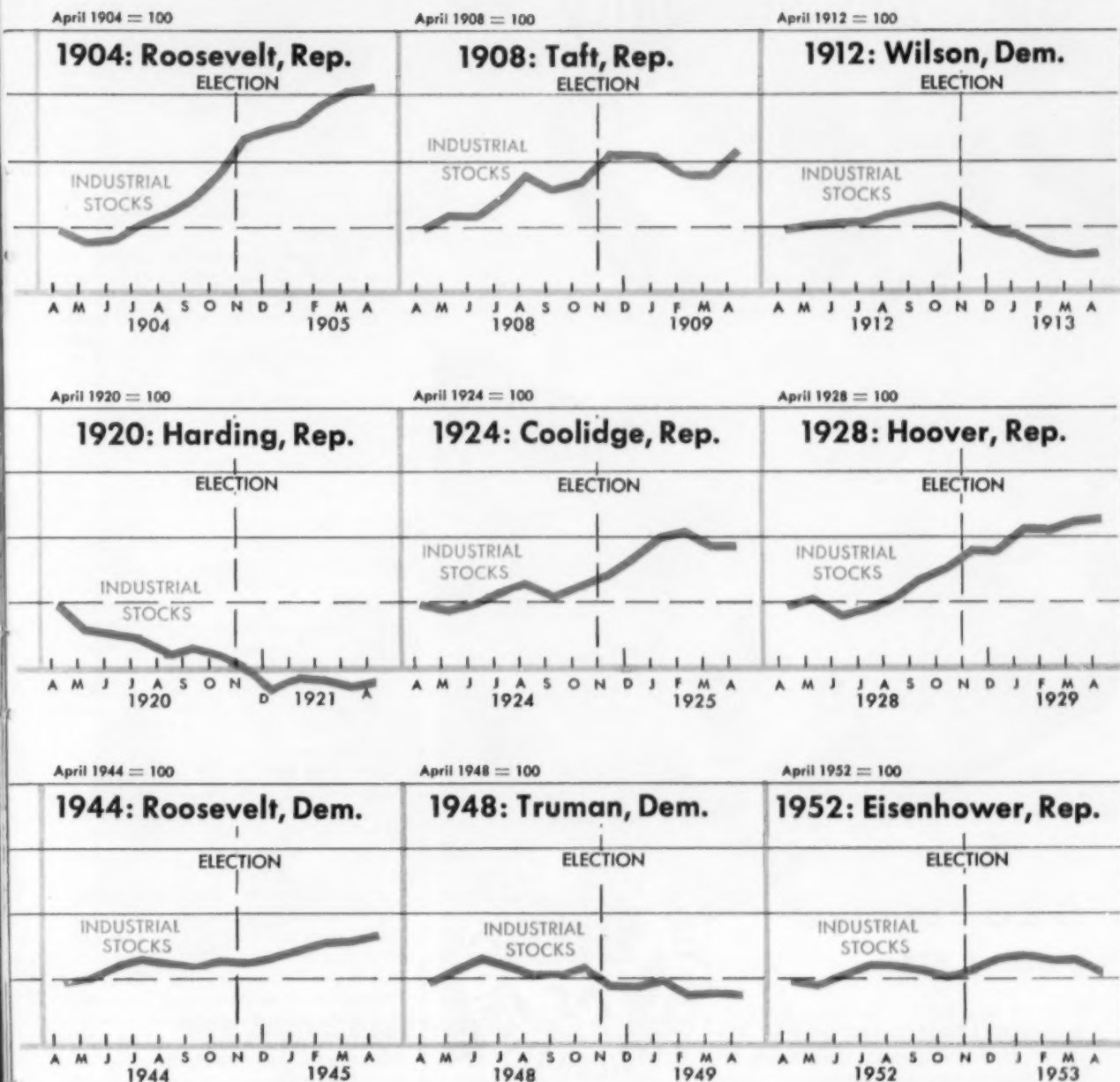
the years, that truth has evaporated. Nowadays, as one Wall Street historian has pointed out, "a Presidential election year has no more significance than the fact that it is also leap year." The change had been evident as early as 1932, when Arthur F. Burns—now chairman of the President's Council of Economic Advisers—first warned the nation that it was high time to junk the whole idea. Burns had checked all the "good" and "bad" election years for quite a while back. And he had

come up with two firm, and important findings:

- Good times were just as apt to fall in national election years, as in the times between.

- Good times were just as likely to occur under Democratic Administrations as under the Republicans.

- **The Impartial Record**—Burns' views are amply supported by the charts showing the trends of a Big Board industrial stocks during the 14 election years that have fallen in this century.



Belies Old Adage That It Will Sag

Seven times the Republican standard bearer triumphed, and seven times the Democrat. But the industrials, with fine impartiality, were usually perched higher six months after the election than six months before it, no matter who won.

For the dying adage, there is this sop. The industrials did generally climb higher when the GOP triumphed than when the Democrats won. Thus Woodrow Wilson's victories in 1912 and 1916 brought much smaller market

risks than had the three preceding Republican wins. And Franklin D. Roosevelt's four triumphs put a lot less zing into stocks than had the easy victories of Calvin Coolidge and Herbert Hoover. Not to mention the slump that followed Harry Truman's surprise win in 1948.

• **Winning on the Rise**—Even these differences can be overstressed, since many of the Democratic victories since 1900 have been distorted by depression and war. By the same token, some

Republican victories—notably those of Coolidge and Hoover—were inflated by boom times. Indeed, so powerful was the current of optimism in the 1920s that Democratic victories would probably not have slowed it to any extent. On one occasion, the Republicans were innocent bystanders, when Harding came into office during the business slump that followed World War I.

• **Alas, Poor Seers**—On several occasions, the election results have ended up by making the prophets look very

Sure Dependability!



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You can trust B&O Time-Saver Service! It combines the advantages of rail transportation and outstanding carrier experience to give you *maximum* dependability. That's why less-than-carload freight reaches its destination dependably on-time. And your LCL is treated carefully . . . on quick schedules, too! Yes, it's a *smart* move to ship via B&O!



Ask our man!



foolish indeed. The election of Hoover, greeted by hosannas, was followed by the 1929 crash and the grim Depression of the 1930s. And the market moanings that followed Truman's 1948 victory had, by mid-1949, changed to the record bull market that is still officially under way after seven years. Even Pres. Eisenhower's landslide win, after sparking one burst of market strength, then touched off an extended period of weakness that made many Streeters fearful for a time of a real bear market.

• **Prices and Causes**—The absence of any real stock price pattern in election years has one great basic cause: Price action in the market, reflects the hopes and fears of myriad investors and traders, and owes its direction to an infinite number of factors. Campaign oratory and election results do play a large—occasionally even a dominant—part in the thinking that goes to "make" a market. But politics as such are not always the biggest price factor in an election year. In this election year of 1956, that's particularly true.

Take a look at the current thinking. Undoubtedly the Street is rather uneasy over the political picture; that probably means that many investors and traders are uneasy, too, since the Street usually reflects their views. Much of the unhappiness stems from the Democratic victory in normally Republican Maine. Some see in this upset a mere trimming down of Eisenhower's expected victory margin. But others feel it may well presage a Democratic Congress, and even possibly the defeat of the President himself. Even the former, they fear, would mean the hamstringing of Republican "peace and prosperity" legislation.

• **No Matter Who Wins**—There's another school, and not a small one, that thinks stock prices will have a bad time no matter who wins. This group argues that if the Republicans win, and so rid themselves of electioneering pressures, they will quickly take harsh steps to restrict credit and otherwise ward off inflation. On the other hand, the group expects that a Democratic victory would be followed by much price-depressing selling of stocks by worried and disappointed investors and traders.

That adds up to a lot of influence from politics, but the Street is agreed that many other non-political matters must share in the blame for the market's recent discouraging performance. Notably, the blame is affixed to the Suez impasse, the serious squeeze on credit, the widespread feeling that the bull market is "too old" and that many prices are too high, and the growing belief that the whole economy badly needs a long "waiting period" to digest its postwar gains.

The Street is in its usual state of divi-



We build electronic "BRAINS" for guided missiles

A missile's accuracy in reaching its target depends upon the reliability of precision electronic controls.

From the very beginning, scientists and engineers of the International Telephone and Telegraph Corporation have been at work on guided missile systems, applying world-wide experience and a score of special skills.

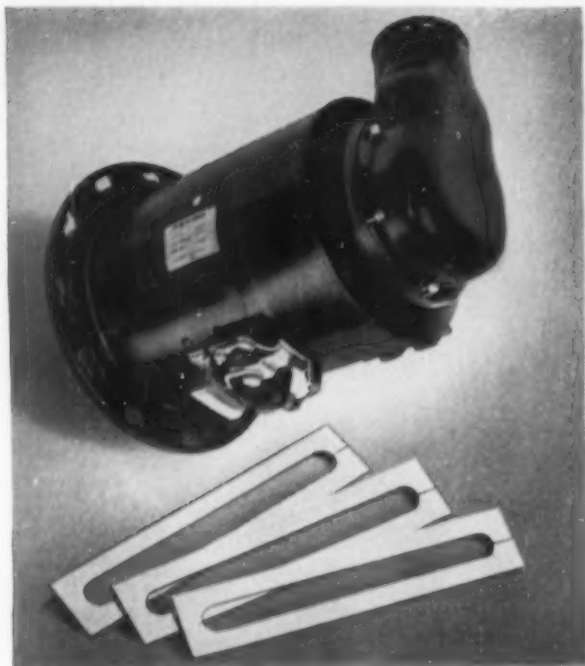
FEDERAL TELECOMMUNICATION LABORATORIES and FARNSWORTH ELECTRONICS COMPANY, both divisions of IT&T, are deeply engaged in research, development, and manufacture of missile guidance and precision remote control

systems . . . contributing to the conception and operation of such missiles as the Terrier, Talos, Sparrow, Meteor, Rascal, and Bomarc.

Missile guidance is one more field in which the creative engineering and the integrated facilities of IT&T are developing new concepts in electronics and telecommunications.



INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION, 67 Broad Street, New York 4, N.Y.

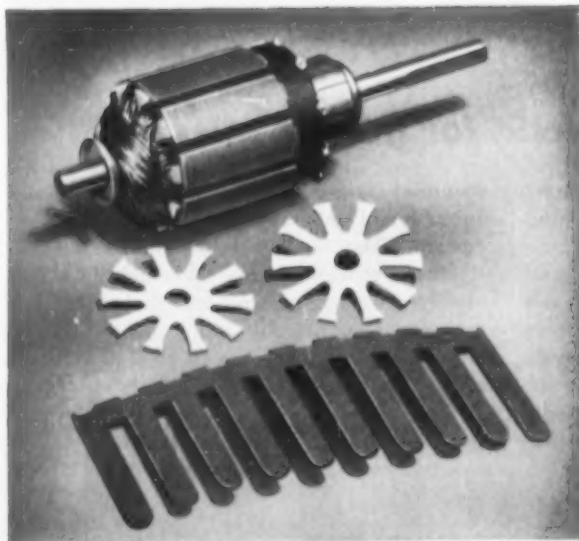


Temperatures run high in this airblast-cooled DC generator for aircraft use. For rotor winding insulation, Jack & Heintz designers picked Taylor GSC silicone laminate . . . excellent for extreme heat. For similar high-performance motors, this company also uses Taylor G-5 melamine laminate for top-sticks.



Power for precision. This servo motor, used in Honeywell electronic process control instruments, uses a stator case insulator punched from Taylor Grade XP phenol laminate . . . a quality grade with good fabricating properties.

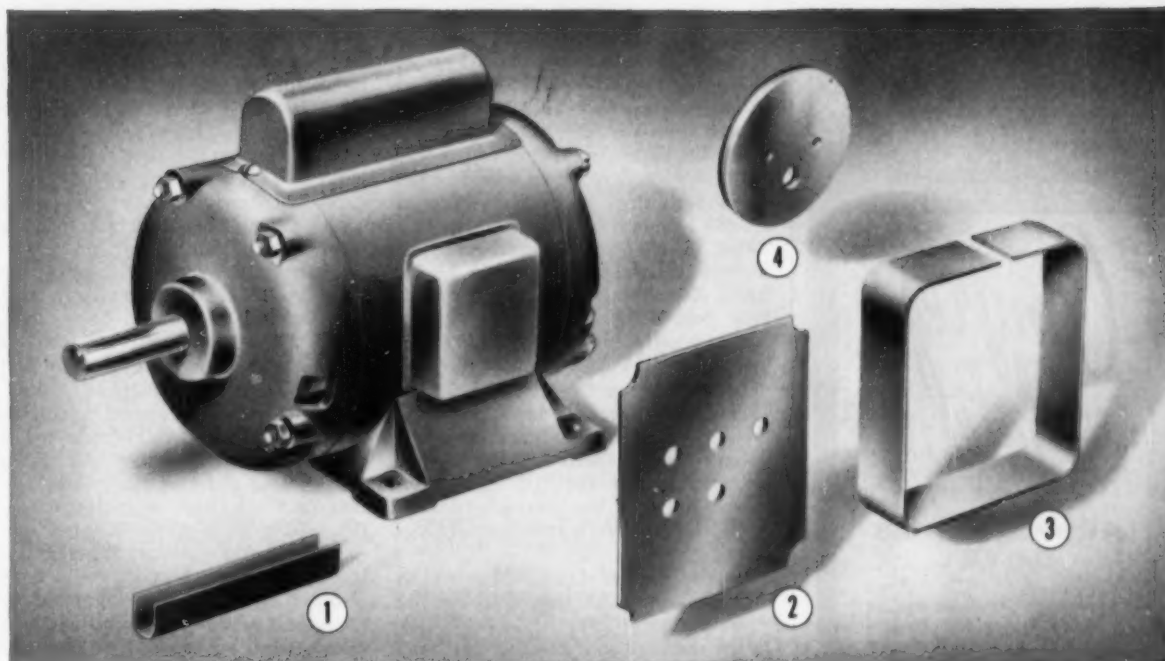
Here's how Electric Motor



Toughness and flexibility are required for insulation for motor armature windings. Redmond uses Taylor Insulation and Commercial Grade Vulcanized Fibre for slot wedges, top-sticks and end laminae . . . and paper base phenol tube for the thrust bushing.

New Taylor Copper-Clad Laminates

Taylor GEC (glass-epoxy) Copper-Clad & Taylor XXXP-242 cold punching (paper-phenol) Copper-Clad. Taylor uses high purity rolled copper on base materials with outstanding electrical properties.



Typical fractional horsepower motor has multiple uses for Taylor materials. (1) Formed strips (slot wedges) of Taylor Insulation fit snugly into armature slots, to protect winding against damage and provide electrical insulation. (2) Terminal Board is made of paper base

phenol laminate, has high dielectric strength and is easily punched. (3) Terminal Box Safety Liner is easily formed from vulcanized fibre. (4) Capacitor End Plate, of paper base phenol laminate combined with rubber, affords excellent insulation and sealing characteristics.

Manufacturers use

TAYLOR FIBRE AND LAMINATES

FROM the standpoint of both performance and economy, insulating materials are a highly important part of electric motors. In the midst of heat, vibration and mechanical stress, these materials must stand up with complete dependability.

When they think of insulation, designers of electric motors think of Taylor materials. The applications pictured here illustrate a few of the many special assignments filled by Taylor vulcanized fibre and laminated plastics. Common to all fractional h.p. motors is the use of paper base phenol laminate for terminal plates, vulcanized fibre for terminal box lines, and combinations of laminate and rubber for capacitor parts.

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sion over which of these factors to blame the most. And it's just as divided over the question of whether the current down drift is the beginning of something deep and steady, or whether it will clear up once Suez and election uncertainties are out of the way.

• **Market Slips**—As a matter of fact, the only thing the Street does seem to agree on is that there is more bearishness around than has been seen for quite a while. The accord is understandable, for prices have been taking a terrific lacing, even though the averages don't fully show it.

The sampling below shows that many high-grade stocks—institutional favorites until quite recently—are now selling 15% or 20% or even much more off their bull market highs. The drops haven't been confined to a few groups; few sections of the list have been spared, not even the glamorous growth stocks or time proven and resistant blue-chips.

• **Experts Ponder**—One not-too-bearish observer points out that much of the going pessimism may be "a throwback to the doubtful idea that big bull markets (one of which we have certainly seen since 1949) are inescapably followed by big bear markets involving loss of a major part of the whole previous rise."

Other observers, no less smart, are suggesting that it is a good time for investors to put their portfolios in shape to withstand some chilly weather. They point to the fact that many "good" bonds now have higher yields than many stocks that have been buying favorites. And they claim also that the economy lately has been showing many signs of stress and strain. And they find many warning signals in the market's own technical position.

Many of those with strong feelings along such lines, it might be pointed out, are by no means "congenital" bears. Up to fairly recently, indeed, they were prominent members of Wall Street's large bullish coterie.

Neither are they currently predicting any cataclysmic market drop such as followed when the 1929 bull market finally burst apart at the seams. But they do think, however, that ahead of the market lies a period of unrest during which, as one current bear expresses it, "stock prices generally could come down by 20% to 25%, with greater declines in a number of groups and individual issues." They may or may not be a bit too early with this suggestion, as many bulls claim. One of the Rothschilds is credited with the statement that he made his fortune "by buying low and selling out too soon."

Recent Losses: A Sampling

Common Stock	Recent Price Vs. 1955-56 High	Common Stock	Recent Price Vs. 1955-56 High
Allied Chemical	-25.7%	Mead Corp.	-22.3%
Allied Stores	-22.0	Monsanto Chemical	-30.6
Allis-Chalmers	-19.8	Natl. Cash Register	-20.3
Aluminum Co.	-19.5	National Gypsum	-19.6
American Can.	-14.5	Owens-Illinois Glass	-19.8
Amer. Smelt. & Rfg.	-15.2	J. C. Penney	-20.9
American Viscose	-39.2	Philco Corp.	-53.6
Armstrong Cork	-15.9	Pillsbury Mills	-29.3
Beaunit Mills	-43.6	Radio Corp.	-30.3
Campbell Soup	-17.9	Rayonier Corp.	-21.4
Champion Paper	-21.7	Rheem Mfg.	-56.6
Chrysler Corp.	-28.6	Rohm & Haas	-20.2
Cinn. Milling	-16.3	St. Joseph Lead	-19.3
Clark Equipment	-21.9	St. Regis Paper	-19.7
Coca Cola Co.	-24.8	Schering Corp.	-20.9
Colgate-Palmolive	-21.5	Scott Paper	-16.8
Continental Oil	-15.9	Sears, Roebuck	-24.5
Corning Glass	-19.4	Sinclair Oil	-17.5
Crane Co.	-28.2	Socony Mobile	-25.4
Crown Zellerbach	-22.5	Southern Pacific	-17.6
Deere & Co.	-33.7	Southern Ry.	-17.0
Diamond Match	-21.7	Spencer Chemical	-32.5
E. I. du Pont	-20.3	Spencer Kellogg	-25.7
B. P. Goodrich	-21.0	Standard Oil (Cal.)	-19.7
Gulf Oil	-22.0	Standard Oil (N. J.)	-15.6
Hercules Powder	-23.3	Superior Oil	-18.0
Hooker Electro	-19.6	Superior Steel	-22.3
Industrial Rayon	-34.7	Texas Co.	-20.4
Int'l Bus. Machines	-13.6	Texas Gulf Sulphur	-31.2
Int'l Harvester	-16.5	Union Bag-Camp Paper	-28.4
Int'l Paper	-20.1	Union Pacific	-28.4
Int'l Silver	-27.6	U. S. Gypsum	-21.1
Jeff. Lake Sulphur	-29.2	U. S. Rubber	-22.4
Kimberly-Clark	-20.8	Vick Chemical	-27.7
May Dept. Stores	-18.8	Zenith Radio	-24.7



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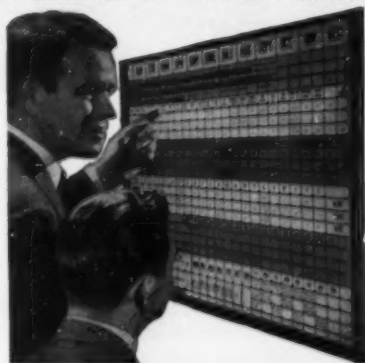
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FINANCE BRIEFS

First National City Bank of N. Y. last week nosed ahead of Chase Manhattan Bank to rate as the nation's second largest commercial bank, behind San Francisco's Bank of America, the long-time No. 1. The New York Clearing House Assn. statement for the week ended Sept. 19 said First National City and its affiliated City Bank Farmers Trust Co. had combined deposits of \$5,786-million against \$5,774-million for Chase Manhattan.

Higher interest on H and E bonds will be urged on Congress next year by the Treasury, according to repeated but unconfirmed rumors. The 3% savings bonds have had shrinking sales ever since the Fed's efforts to "tighten money" have brought juicier rates to competing investment mediums.

Johns-Manville Corp. expects sales, and possibly profits, to reach a record high this year, despite the drop in home building. Chmn. L. M. Cassidy predicts 1956 sales of \$300-million, compared with the old high of \$285-million last year. And Cassidy thinks net profits have a good chance of topping the \$24.5-million record set in 1951.

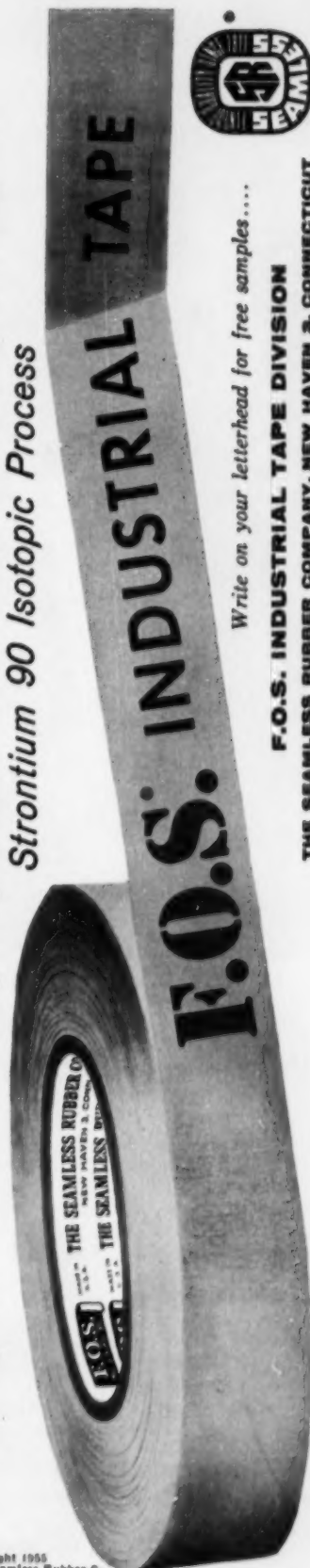
New York Savings Banks have dropped for the nonce their idea of boosting the interest rate on deposits to 3½% from 3% (BW—Sep. 1 '56, p82). The State Banking Dept. is said to frown on any such increase, feeling that not all banks could afford to pay the higher rate.

Public Service Electric & Gas Co. will soon sell publicly \$50-million of new bonds and 1-million shares of additional stock, now worth about \$28-million.

The Securities & Exchange Commission by itself can't eliminate unethical and fraudulent stock salesmen, warns SEC Chmn. J. Sinclair Armstrong. "We're enforcing the securities laws as vigorously as possible," he reports, "but the American people have got to take some responsibility themselves." They had better get busy, Armstrong indicates; some New York City securities activity, he says, has lately begun "to resemble the old-fashioned boiler room operations of the early 1930s."

The World Bank has arranged to borrow \$75-million in dollars from foreign sources on two-year 3½% notes. President Eugene R. Black says the lenders involved in the deal include central banks, commercial banks, insurance companies, and private investors—all outside the U. S.

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Or, inquire directly about how we can help you with specific materials problems. Send your correspondence to our Technical Products division. It will receive prompt and expert attention.

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PRODUCTION

The roadbuilding business is already humming at its highest pitch ever. Now Congress has adopted a federal-aid program that assures new peaks of spending in a few years, and . . .

The Boom Is Just Beginning





A HOUSE SUCCUMBS to the crowbar as the route-clearing job keeps one jump ahead of the power shovels and the wagons.

Story starts on preceding page

WHEN CONGRESS passed the Federal Aid Highway Act (BW—Jun.30'56,p29), it not only promised relief to traffic-jammed motorists and a receptive market to Detroit. It also superimposed a new boom on the already record-breaking construction and construction machinery industries.

At its peak, the new program—largest public works goal in the nation's history—may double the current annual outlay for roads and bridges: \$5.7-billion. Over its 13-year life, roadbuilding expenditures on federal, state, and local levels will range from well above \$6-billion to perhaps \$12-billion a year.

• **Superhighway System**—The most costly, most spectacular part of the program is the network of 41,000 mi. of superhighways to hook up all major cities. For this

project, Congress authorized \$25-billion as the federal share (90%, with states paying the other 10%) over the next 13 years.

To qualify for 90% federal aid, highways must be of the type represented by the Massachusetts Turnpike (pictures), although that road is a toll project not eligible for the federal program. Except in the most sparsely populated areas, the roads must be divided, with limited access and no crossings of either railroads or highways at the same level.

• **Cost Can Run High**—The cost of such dual highways depends on the nature of the countryside. Across the plains of Kansas, it may run only \$250,000 a mile; in a part of New Hampshire, it may cost \$500,000 a mile. In urban areas, over high-priced industrial sites, or in tricky terrain, the cost per mile jumps into another magnitude. Chicago's Calumet Expressway averages \$10-million

The 123-mi. Massachusetts Turnpike, pictured on these pages, involves moving 40-million cu. yd. of earth, assembling 60,000 tons of steel in bridges, laying 200 miles of piping.



COFFERDAM of steel sheeting is first step in crossing a lake and swamp. It keeps water away from the foundation work.

LAST STEP before traffic is to finish the shoulders. At right, a mobile piledriver sets steel posts for fence.



CRAWLER TRACTORS are the all-purpose tool. Here they spread a layer of topsoil on the slopes of a fill across swampland.



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MAKES GOOD MERCHANDISE SELL BETTER

STORY starts on page 119

a mile; the New Jersey Turnpike's link with the Holland Tunnel at Jersey City probably holds the record—\$14-million a mile.

Massachusetts' 123-mi. turnpike from Boston to the New York state line in the Berkshires will cost slightly more than \$240-million in all, slightly less than \$2-million per mile. It has perhaps more than its share of bridges—185 of them—but otherwise, in a field where averages don't mean much, it's a typical example of the nation's new roadbuilding job.

• **Close to Schedule**—Despite floods, hurricanes, a bad winter, a late spring, and periodic shortages of steel and cement, the Massachusetts pike is close to schedule. The Turnpike Authority hopes to get traffic rolling over the entire length by mid-November. The 21 contractors for the 32 sections are winding up their work at about the same time.

The turnpike people planned it that way. Many other highways, such as the New York Thruway, have developed in sections over a period of years, when one segment might be carrying traffic while others were still going through land acquisition and land clearing. But Massachusetts didn't want to be paying on bond amortization for completed sections that can't carry their designed traffic load. It wanted the road to be finished and to start paying off all at once.

Dividing the 123 miles into 32 contract sections accomplished something else, too. The 21 contractors found themselves instinctively racing each other, since all were doing the same work at about the same time. This spirit, as much as the penalty clause that hung over any laggard, is credited with turning out the job on time.

I. First a Paper Highway

The actual construction work, with its roaring Cats, shovels, rock drills, and dump wagons (pictures, pages 119 to 121), is the most exciting, most expensive part of a highway project. But the planning that goes on before a shovelful of dirt is moved makes the biggest difference in the cost and ultimate value of a highway. In the case of the Massachusetts pike, this paperwork took 24 years.

• **How a Road Starts**—The Massachusetts pike got out of the talk stage in 1952 when the legislature created the authority, gave it the right of eminent domain, and authorized a bond issue.

De Leuw, Cather & Co. made traffic surveys along the general route and, in turn, engaged Coverdale & Colpitts, traffic consultants, to analyze all data independently.



BRIDGES like this one over the Quaboag River cost 10 times as much per mile.

Traffic studies for brand-new roads require a many-sided approach. They usually include surveys in which drivers are interviewed concerning where their trips start and end, tests of driving time over existing roads (survey drivers ticked off more than 10,000 mi. in collecting data for the Bay State pike), mechanical traffic counts over the entire area, and review of all local traffic studies made by state and city agencies.

The traffic analysis looks at all data, predicts potential traffic volume, and spells out the benefits that will lead drivers to use a new toll road. For instance, using the turnpike across Massachusetts will save an average of 2 hr. 2 min., for which the Turnpike Authority figures drivers will be glad to shell out \$2.45 in tolls.

For the engineering studies, the general consultants were Howard, Needles, Tammen & Bergendoff of New York and Kansas City. Late in 1952, this firm apportioned sections of the route to five other engineers, each

responsible for construction standards and detailed design of his section.

• **Turning Point**—It's at this stage in highway construction that some of the most important decisions are made affecting cost of the road. Before a line can be drawn on engineering plans, the engineers must lay out the exact route and must establish standards of construction, including a full set of engineering specifications.

II. Picking a Route

At its simplest, route selection means mapping a compromise between the shortest and cheapest roads that will connect the traffic centers you want to serve. And the shortest won't be the cheapest if the route strikes difficult terrain or highly developed property. On the other hand, the route can't meander too much without losing its appeal to drivers as a time-saver.

In practice, route selection means considering topography, existing roads,



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planned roads, rock and soil conditions, drainage, availability of "borrow" areas that can supply earth and rock for fill, and the number of existing buildings that will have to be destroyed or moved off the right of way.

- **Acquiring Land**—Roadbuilders have learned the wisdom of acquiring sufficient land in advance for the foreseeable needs of the road—otherwise they find themselves faced with having to expand the right of way by taking land whose value has been boosted by existence of their own road.

However, the fewer houses you displace in laying out a new route, the better your chances are to avoid the inevitable little old lady with a shotgun who's not cowed by your right of eminent domain. In Massachusetts, ingenious route selection kept the toll of residential dislocations low, even in the densely populated eastern region.

Only 273 houses were in the way, and 144 of those were moved to new sites. The project also meant moving or demolishing 31 commercial buildings and 413 barns, sheds, silos, and other structures.

- **Mapmaking**—Within a month after the bond issue was sold in March, 1953, the engineers had the general route completely mapped. Using aerial surveys and the latest techniques of photogrammetry, they produced a set of topographic maps that reveal variations in elevation as slight as 2 ft.

Such maps were valuable in determining the amount of earth that had to be moved, either for cuts or for fills—a basic figure for contractors who are working out their bids. With the latest photogrammetric equipment, you can even get a computer to figure out cut-and-fill yardage for you in about one-thirtieth of the time it takes to calculate it otherwise.

- **Engineering Standards**—Meanwhile, engineering consultants wrote the general specifications for the road. They decided on a controlled-access highway with two or three 12-ft. lanes in each direction, separated by an 18-ft. raised strip. With 4-ft. inside shoulders, high-speed lanes are effectively separated by 26 ft; outside shoulders 10 ft. wide provide space for emergency parking.

Design speed of the road is 70 mph., with a minimum curve radius of nearly a mile, except in mountainous or urban areas, where a 3,000-ft. radius is minimum. Grades are held to a maximum of 3½% upgrade and 4% downgrade, even in the Berkshires. That keeps the trucks rolling.

- **Safety First**—Even at higher average speeds, such a road is safer than the average conventional highway. Records prove it. C. D. Curtiss, U.S. Commissioner of Public Roads, has published a survey that compares accident rates on 2,500 miles of highway:

- For roads without access control, 408 accidents, 8 fatalities per 100-million vehicle-miles.

- For controlled-access roads, 171 accidents, 2.8 fatalities per 100-million vehicle-miles.

- **Specifications**—The engineers also wrote detailed specifications for soil densities and drainage (what's under the pavement is very important in a road's serviceability over the years), bridge design, pavement, even landscaping and planting.

They decided on a blacktop highway, with a 14-in. sub-base of free-draining, frostfree material topped by an 8-in. layer of penetration macadam and an asphaltic concrete surface. All viaducts and small bridges are standardized.

III. Building a Road

Within a couple of months after the first aerial surveys of the countryside were completed, the turnpike route had been chosen and final plans had been drawn. By the end of seven months, blueprints for the entire 123 miles were in the hands of contractors. In mid-January, 1955, the first contract was awarded to B. Perini & Sons of Framingham, Mass. for a 3.9-mi. section near the eastern end.

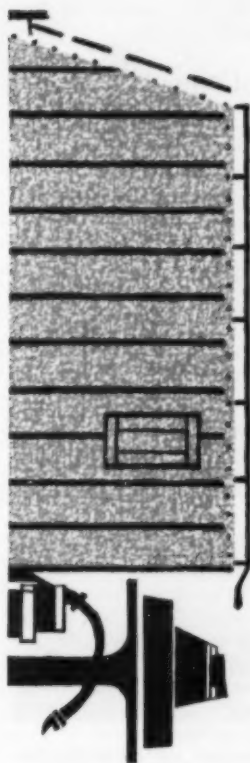
- **Shine or Rain**—The dryness of the 1955 summer was helpful to the contractors in clearing, cutting, filling, and grading. The varied terrain, however, called for versatility—it wasn't unusual to find a contractor on a 3-mi. or 5-mi. stretch simultaneously engaged in blasting through foothills, filling bogs, bridging streams and roads, and working on naturally straight and level stretches.

In the fall of 1955, hurricane winds and floods hit the pike. There was little direct damage to the earthwork, but deliveries of materials by train and truck were slowed. Contractors also lost time because most of them put their equipment at the disposal of the emergency cleanup and repair crews in New England. They made up the lost time by working under lights on some sections last summer.

- **Costs**—Most of the 32 contracts fell in the range of \$1-million to \$2-million a mile for construction cost. The three largest bridges—over the Quaboag, Westfield, and Connecticut Rivers—were contracted to specialists and, on a per-mile basis, cost about 10 times as much as regular highway.

Land acquisition altogether is expected to cost a shade over \$10-million. That's less than 5% of the total cost and it's even below the engineering costs, which come to approximately \$12-million.

The two costliest items, each nearly \$50-million, are earthwork and structures (bridges, overpasses); pavement



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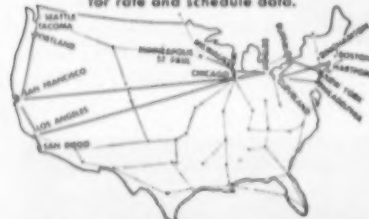


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126 Production

and shoulders cost \$22-million; drainage, nearly \$10-million. In sum, construction costs eat up \$153-million of the \$240-million total.

IV. National Pattern

To connect every city of 50,000 or more with roads like the Massachusetts Turnpike will be a huge project, but the pattern of construction won't have to change much.

In view of the federal program, the American Road Builders Assn. ran a survey this year to see if heavy contractors felt they could meet a highway construction volume of \$10-billion a year by 1960. The answer was that the job could be done, if highway builders use all modern techniques for spurring productivity: aerial mapping, computers for design and engineering calculations, efficient use of men and machines, standardization of designs, planning farther ahead.

• **Shortages**—The roadbuilders see no lack of machines or labor. They say the most serious shortage may be in qualified highway engineers. Only 600 civil engineering graduates each year go into highway work, and only 32,000 highway engineers are now employed, according to Engineering News-Record, a McGraw-Hill publication.

Another potential bottleneck is the reluctance of many legislatures to authorize land acquisition, and to provide funds for it, very far ahead of construction. However, many states are following California's lead in setting up revolving funds to acquire land for future highway projects.

• **The Impact**—The association's survey shows the heavy impact of a highway stepup on the rest of the nation's economy. Many of the findings on materials were incorporated in the Bureau of Public Roads market analysis, which estimates a 40% increase in demand for highway materials in the next four years (BW-Jul.21'56,p30).

The survey also shows a need for about 57,000 additional roadbuilding machines for each \$1-billion increase in annual capacity of the highway construction industry. Engineering News-Record estimates that this equipment would cost \$500-million.

Need for labor won't increase by any such margins. As machines are improved and used to fuller advantage, the number of man-hours per dollar of work in place is dropping steadily.

In 1948, contractors used 128,000 employees to put \$1-billion worth of work in place. Last year, the proportion was down to 67,000 men per \$1-billion. According to the association, the present work force of about 580,000 men would suffice for a highway program of about \$10.4-billion a year, nearly double the current rate. **END**

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Adaptability to all sorts of mechanical situations explains the widespread use of TRU-LAY PUSH-PULLS.

Accuracy is inherent in their design.

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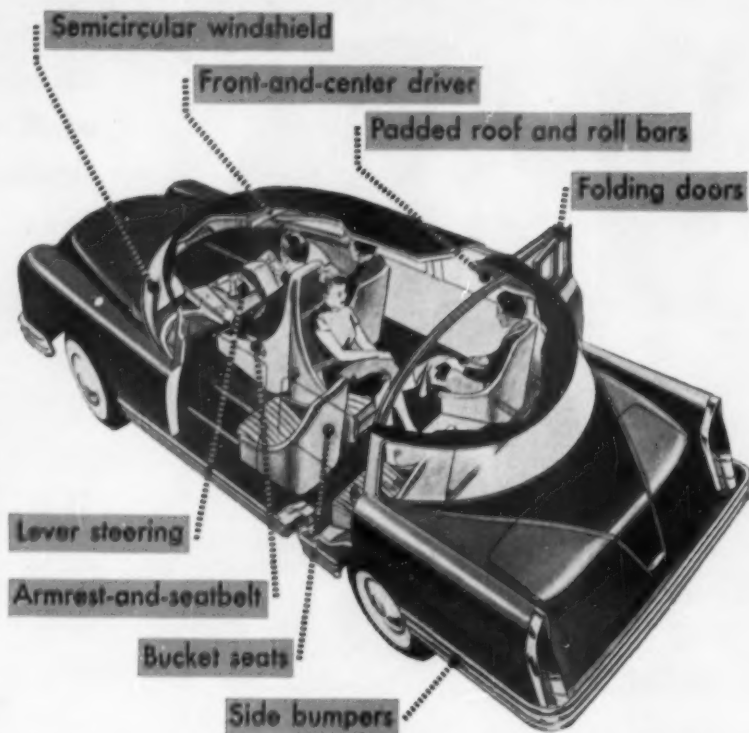
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Safety Package for a Car



CRASH-PROOF is what Cornell Aeronautical Lab calls prototype it's building as a...

Design for Living—on the Road

Cornell Aeronautical Laboratory, Inc., the home of automobile and aircraft crash injury research, has evolved out of its long study of the subject what it believes to be the ideal crash-proof car—and it's building a prototype model (above) that will be running sometime in 1957.

The joint sponsors of the project—Liberty Mutual Insurance Co. and the Safety Design Research Dept. of the Cornell laboratory—claim that the car, however strange it may look, would "package" you so well that you could walk safely away from head-on collisions occurring at speeds even up to 50 mph. (Presumably, though, you would still have to leave the car to the tender mercies of insurance agents and body-and-fender men.)

Liberty Mutual claims the car's safety features, if universally adopted, would cut the injury and death rate from accidents almost in half.

• **Selling the Salesmen**—Though the car's box-like look and radical front-and-center driver's seat amount to sales heresy in Detroit, you can't discount the effect this model car may ultimately have. Remember that Cornell's well-

publicized pioneering efforts in auto safety have already encouraged automobile manufacturers to (1) admit there is such a word as safety, and use it in advertising their cars; (2) recommend installation of seatbelts, padded dashboards and visors; and (3) install stronger door latches, recessed instrument panels, and shortened steering posts.

• **What It Has**—So if the Cornell safety car "takes" in Detroit, here are some of the changes you may see in the next few years.

• **Lever steering.** Cornell researchers consider the steering post—even foreshortened—a lance pointing at the driver's chest. They'll replace it with a soft pad that covers a steering lever with handles on either side. This is not only safer, they claim, but it gives your natural reflexes a chance to act more quickly. Cornell psychologists argue that moving a steering yoke (like the one on a kiddie-car) is more natural than turning a wheel.

• **Front-and-center driver.** The driver's seat in the Cornell car is several inches forward of the two front-seat passengers at either side of him—

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In the field of new construction, making a sale is possible only after someone has decided to build. After that it's no more than a "toss-up" that you will get the order *unless* you know where the sale can be made, on whom to call and when! Dodge Reports give you this sales-getting information. With Dodge Reports you'll know in advance who's building what and where, and when to make your bid for the business—you'll know the man to see, and when to see him. Furthermore, when you get Dodge Reports, you get more than routine advance information—you get the fastest, most complete construction news service you can economically use. Here's why...



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One of a series telling what Chesapeake and Ohio is doing to make this a bigger, better railroad.

Kitten on the keys

At the control panel of Univac, the kitten has her paw on what is going on all over the 5,100 mile route of Chesapeake and Ohio—the first railroad to install a large scale electronic computer system.

Univac provides information as fresh as this morning's sunrise for use by management in planning Chessie's future growth. Projected applications include recording thousands of shipments moved for thousands of C&O customers; accelerated revenue accounting and

inventory control of the 65,000 items needed to run the railroad.

Every three months Univac goes through the list of Chesapeake and Ohio's 90,000 stockholders, figures how much each should receive at the current \$3.50 dividend rate, and writes their checks at the rate of five checks a second.

In half a day it can make up the paychecks for 34,000 C&O employees, figuring what each receives for the number of hours he worked, plus over-time and less withholdings and any other deductions that may be indicated.

Adaptation of large scale electronic computing to railroad operation is another demonstration of Chesapeake and Ohio's willingness and ability to develop fresh techniques in the interest of superior transportation.

And this is just one phase of Chesapeake and Ohio's modernization program. New diesel locomotives, new cars, new track, new piers, new trainferries, new yards, new signals and—most of all—new thinking have made this a new railroad. A modern railroad, geared to the tempo of today—and tomorrow.

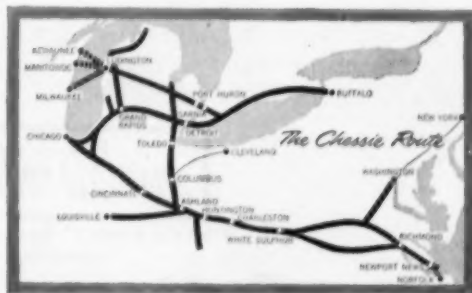


Univac is as accurate as it is fast. It performs every mathematical computation twice and if they don't agree, it goes over the operation again. If they still don't agree, it stops work and yells for help.

Would you like a portfolio of pictures of Chessie and her family? Write to:

Chesapeake and Ohio Railway

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A black and white photograph showing a close-up of industrial machinery, likely a pump or engine component. The image features various pipes, valves, and a large flywheel or circular component on the right side. The scene is dimly lit, with strong highlights on the metallic surfaces, suggesting an industrial or maritime setting.

When hard or soft metals are repeatedly forced together to form a valve seal they soon are eroded or worn out. The result: costly leakage, hazardous conditions, and down time for expensive reseating. Rockwell-Nordstrom lubricated plug valves eliminate these problems because a thin, tough film of pressurized lubri-

cant forms a continuous, leakproof seal between the plug and the valve body. Valve seats are *never* exposed to the line. Rockwell-Nordstrom valves cost no more to buy and far less to use than ordinary valves. Write for more details: Rockwell Manufacturing Company, Pittsburgh 8, Pennsylvania.

- **Bucket seats.** Anyone who has ridden in a sports car knows a bucket seat is much snuggler, makes it unnecessary to fight sway on curves or bumps. Cornell thinks the individual seats give more direct protection and reduce fatigue.

- **Folding doors.** The safety car's oversized doors fold in the middle like phone booth doors. This gives plenty of room to get in and out, and the open doors don't require so much clearance in small garages, parking lots. The doors lock shut with bolts at top and bottom, as well as sides.

• **Armrest seatbelts.** Driver and frontseat passengers in the Cornell vehicle are protected by combination armrest-chestpad-seatbelts that pull out from the dashboard. The bait for using them is that you're more comfortable when the combination armrest and safety belt is in position than when it's stowed away. The body-restraining straps will withstand a 3,000-lb. impact—and that's approximately the force of a person thrown forward in a very serious collision. The chestpads, which actually sit in your lap so you would fall forward on them, are of shock-absorbing material, can be used as a lap table.

- **Padded roof and roll bars.** Two hoop-like bars reinforce the car roof at front and rear. Reason for padding the roof is this: Cornell's research showed that you usually fly out of your seat in head-on smashups at an upward angle of 45 deg.

- **Semicircular windshield.** Locating the driver in the center of a semicircle of glass eliminates the visual distortion and eyestrain caused by present irregularly curved windshields, according to Cornell. In the safety car, the driver always looks through the glass at about a right angle.

• **External cleanup.** The outside of the car is free of spears, hooks, and needless bumps—that's for the benefit of pedestrians who might be hit. Headlights are sunken rather than visored. Both front and rear bumpers are rounded, to increase the chance of getting or giving a glancing blow (always less severe than direct impact).

- **Side bumpers.** Bumpers extend all the way around the safety car. The new side ones are designed to absorb shock—but not to spring back fast. If pushed in, they return to their position slowly.

• **Styling**—The Cornell researchers' main aim, of course, was to design the safest possible vehicle, for demonstra-



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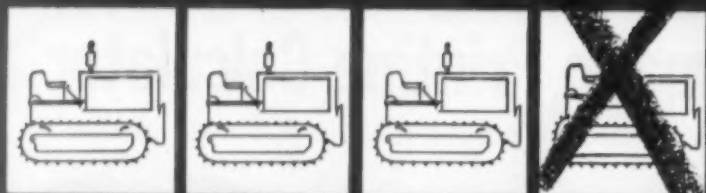
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With men who know converters best...it's Twin Disc 3 to 1!



For years, the construction industry has been the "proving ground" for heavy equipment. And the toughest jobs, under the severest conditions, have constantly been assigned to the crawler tractors. That's why men who built and used crawlers were among the first to recognize the advantages of torque converter drive... and are the men who know converters best.

Today, the four manufacturers of the most powerful crawler tractors available all have torque converter equipped models. Of these, all three of the "Big 3" volume producers—Allis-Chalmers, Caterpillar and International Harvester—have special torque converter transmissions, in which they standardize on Twin Disc Torque Converter Components.



TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois
Branches or Sales Engineering Offices: Cleveland • Dallas • Detroit • Los Angeles • Newark • New Orleans • Tulsa

tion and research purposes only. But they haven't overlooked the importance of an attractive package. The latest redesign of the prototype, which will be mounted on a standard low-priced car chassis, is 10 in. longer and 2 in. lower than last year's prototype.

The designers think their car would find a lot of customers in the booming semi-utility market—filling a gap between station wagon and standard five-passenger coupe. They offer all their design ideas free to any car manufacturer who cares to pick them up.

PRODUCTION BRIEFS

Synthetic rubber latex can be made more easily and cheaply by its new processes, says B. F. Goodrich. Savings to the foam rubber manufacturer may run from 3¢ to 10¢ a lb., which would make such latex products as bedding and cushions more competitive with conventional upholstery.

An \$86-million Navy contract to develop a supersonic, carrier-based attack plane has been awarded to North American Aviation. The twin jet two-seater will be called the A3J. Wind tunnel tests, construction of a mockup, and evaluation of the navigation-bombing system are under way.

A submarine pipe of concrete and steel, 12 miles long, was laid in water up to 55 ft. deep across Corpus Christi Bay in a record 80 hr., by the Collins Construction Co. The 104-in. pipe will carry natural gas from Humble Oil's plant at Flour Bluff to Reynolds Metals' La Quinta setup.

A new class of drilling "muds" for deep oil wells has been developed by Socony Mobil Oil Co. The muds will not solidify at the 300F-plus temperatures found at the bottom of drill holes below 15,000 ft. One of the muds, called a calcium surfactant, was used in Richardson & Bass' record 22,570-ft. wildcat well in Louisiana.

No tire squeal on corners and better grip in stopping are offered by the all-synthetic auto tire produced by the Esso Research & Engineering Co. The tires use a new butyl latex that can be bonded with cord on existing machines. Hitherto tires have used GRS synthetic with some natural rubber.

Light and dark effects that plague TV viewers living between two stations on the same channel will be eased by a new RCA broadcasting technique. Improved frequency control and use of better crystals reduces interference.



Anaconda specifies Enjay Butyl rubber

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for more current per circuit...more power per dollar

Anaconda specifies Enjay Butyl insulation for high-voltage cables because this rubber has incredible resistance to ozone. Surpassing the industry's standard three-hour specification test, Enjay Butyl insulation used by Anaconda showed *no injury* after 72 hours of ozone concentration tests—24 times longer than specification requirements. Other rubbers would deteriorate and crack in a fraction of this time.

With the help of Enjay Butyl, millions of feet of Anaconda's cable now in use deliver more current per circuit, more power per dollar.

Perhaps *your* product, too, can be improved with versatile Enjay Butyl. It comes in non-staining grades for white and light-colored parts, offers excellent electrical properties, low price and *immediate availability*. For full information, contact the Enjay Company. Complete laboratory facilities and technical assistance are at your service.



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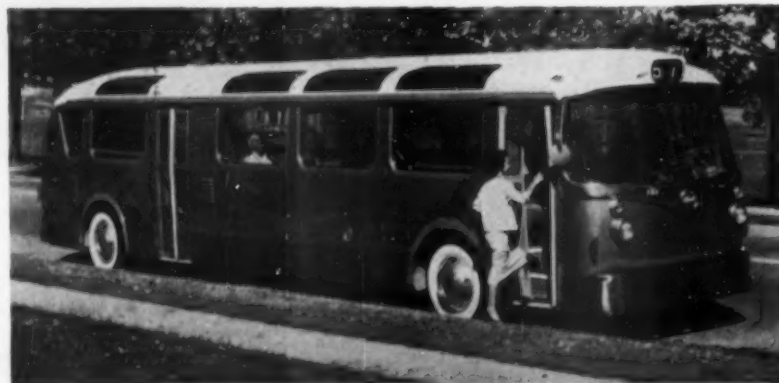
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NEW PRODUCTS



Buses: Overland Card Playing ...



... Air-Conditioned Local Runs

Bus companies—both long-haul and short-haul—are more and more stressing luxury and eye appeal to lure the customers aboard.

Take the intercity bus in the upper pictures. Continental Trailways Bus System of Dallas went all the way to Ulm, in Germany, to get this fancy job that adds a kitchenette and card-playing facilities to less esoteric extras.

Nor is the inside-the-city rider forgotten. Mack Trucks, Inc., in what it calls the Bus of Tomorrow (bottom picture) offers him—and more importantly, her—color schemes, picture windows, and foam rubber seats. There's something in the rear rigged to look like a cocktail lounge; the idea is to coax the customer away from the front of the bus. And to cap it all, there's air conditioning, which is still pretty

rare on buses plying local city streets.

• **Lounge**—Continental's long-haul German-made bus is also air conditioned, which is less unusual in intercity traffic. Dubbed the "Golden Eagle," it has seats for 41 passengers—plus a nine-place observation lounge that is not to be sold, but kept as a playground for the 41. Other features are a powder room and a system of hi-fi records.

On the engineering side, the bus has a six-speed transmission and electric gearshift designed in Germany. There's also a new hydraulic constant level device, to check body sway on curves. Power is supplied by a 280 hp. diesel. Continental says the bus is a prototype for a fleet of 15 or 20 on its luxury runs.

• **Color**—Mack's local service bus, which is designed to carry between 39

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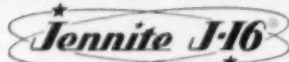
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and 50 passengers, puts special stress on color. The proud designer describes the upholstery as Bahamas sand and Mexican coral, and stanchions of a gold tone; even the windows are tinted. Interior crash pads of foam rubber are an added starter.

For the safety of children and animals in the street, the big windshield "plunges" in the middle to give added visibility downward. There's provision for radio telephone connection with the dispatcher's office. The bus is powered by a 170 php. diesel.

Mack says this bus is an "exploratory" model; the company won't talk about costs yet.

NEW PRODUCTS BRIEFS

A pen that fills by itself is being introduced by the Parker Pen Co. The "Parker 61" has no moving parts; all you do is unscrew the cap and dunk. A patented arrangement of foil walls acts like capillary tubes to fill the pen. Retail price: \$22.50 and up.

A system of movable plywood bulkheads for railroad box cars has been developed for the Shell Chemical Corp. to cut down losses from shifting cargo. By means of rods and ratchets, the bulkheads follow the cargo as it shifts, and lock it in place. Estimated cost is \$750 per car.

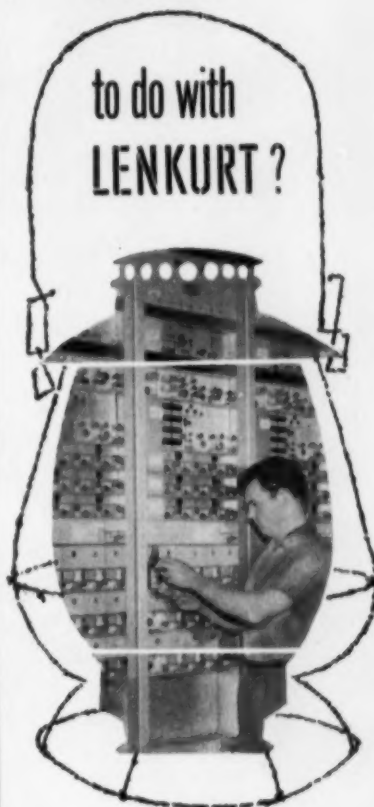
A two-compartment bottle that doubles as a cocktail shaker has been developed by Park & Tilford Distillers Corp. for the Christmas gift season. You get all the ingredients for Martinis or Manhattans in one bottle. The lower compartment holds a fifth of gin or whiskey, the upper compartment 6.4 oz. of sweet or dry vermouth. When you lift out the vermouth compartment, the lower portion becomes an open shaker. Retail price will be about \$9.65.

An explosive type foxhole digger that does its stuff in 90 seconds has been developed for the Army's Engineer Research & Development Laboratories by the Stanford Research Institute. A rocket is driven 2 ft. into ground. In 15 seconds, the explosive charge goes off; it will blast a hole 4½ ft. in diameter, 4 ft. deep.

Portable tanks that can be rolled up like a sleeping bag are being manufactured for oil field use by the Firestone Tire & Rubber Co. at Magnolia, Ark. The hot dog-shaped tanks are made of rubberized nylon and hold 15,000 gal. Cost is said to be competitive with steel tanks.

what have
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More than 50 railroads in the U. S. and Canada use carrier systems made by Lenkurt . . . multi-channel communications equipment that puts many voices and telegraph messages simultaneously on a single circuit, provides the fast, accurate, economical data transmission so necessary in today's railroading. The Southern Pacific alone has more than 70,000 miles of carrier-equipped telephone and telegraph lines.

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For further information, write to Dept. J-3, Lenkurt Electric Company, San Carlos, California or North Burnaby P. O., Vancouver, British Columbia.

THE MARINE MIDLAND

THE STATE OF

A striking index of the way New York is leading the nation's economic growth is this: in the last five years alone, the State's public utilities have invested over one billion dollars in new power plants. And to keep pace with the expansion in population and in industry, the utilities will continue their program.

But electricity, while vital, is only one sign of New York's surging growth. On the map at right, you see symbols of others...science, transportation, education, markets and population which, with power, are explained below in more detail.



It takes people to make markets and New York gets a new consumer every 97 seconds by birth alone. Add to that the thousands who move here every year and it's easy to see why New York has the most people...now estimated at 15,500,000, and with 21,000,000 predicted by 1975. These people not only consume more, they produce more.

New York produces more power than any other state...indeed more than South and Central America combined. Completion of the St. Lawrence power development and the expansion programs of the larger utility companies in other areas will increase this fountain of power considerably.



More scientists and engineers are engaged in research in New York than any other state. These highly skilled technicians are continually uncovering new avenues of knowledge, new products and new processes for the improvement of business and industry. This research effort is symbolic of the state's business vitality.



New York State has 155 colleges and universities teaching the arts and sciences to more than 300,000 students. Each year these institutions send thousands of well-trained people into the state's business and industry. Consider these facts in your plans for expansion or research.



The Empire State has a magnificent transportation system—84,000 miles of highways, 8,000 miles of railroads, outstanding air service, and a Barge Canal System 800 miles long. Completion of the nation's longest Thruway is speeding the movement of goods and people.

When it comes to money, in New York State more money is deposited, invested and loaned than in any other State in the Union. Here, thousands of companies and individuals have found useful the facilities of one or more of the locally managed Marine Midland Banks listed below.



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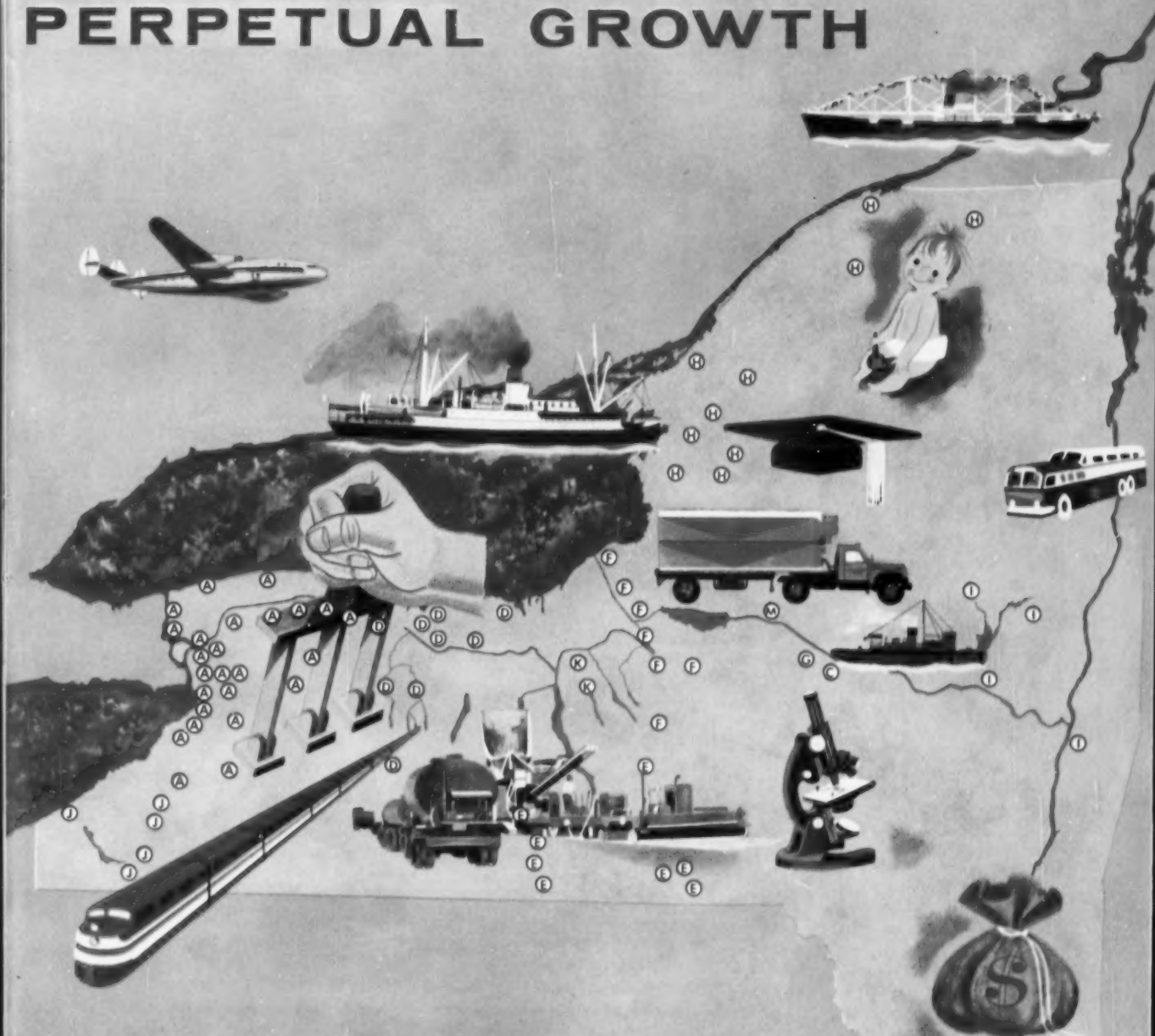
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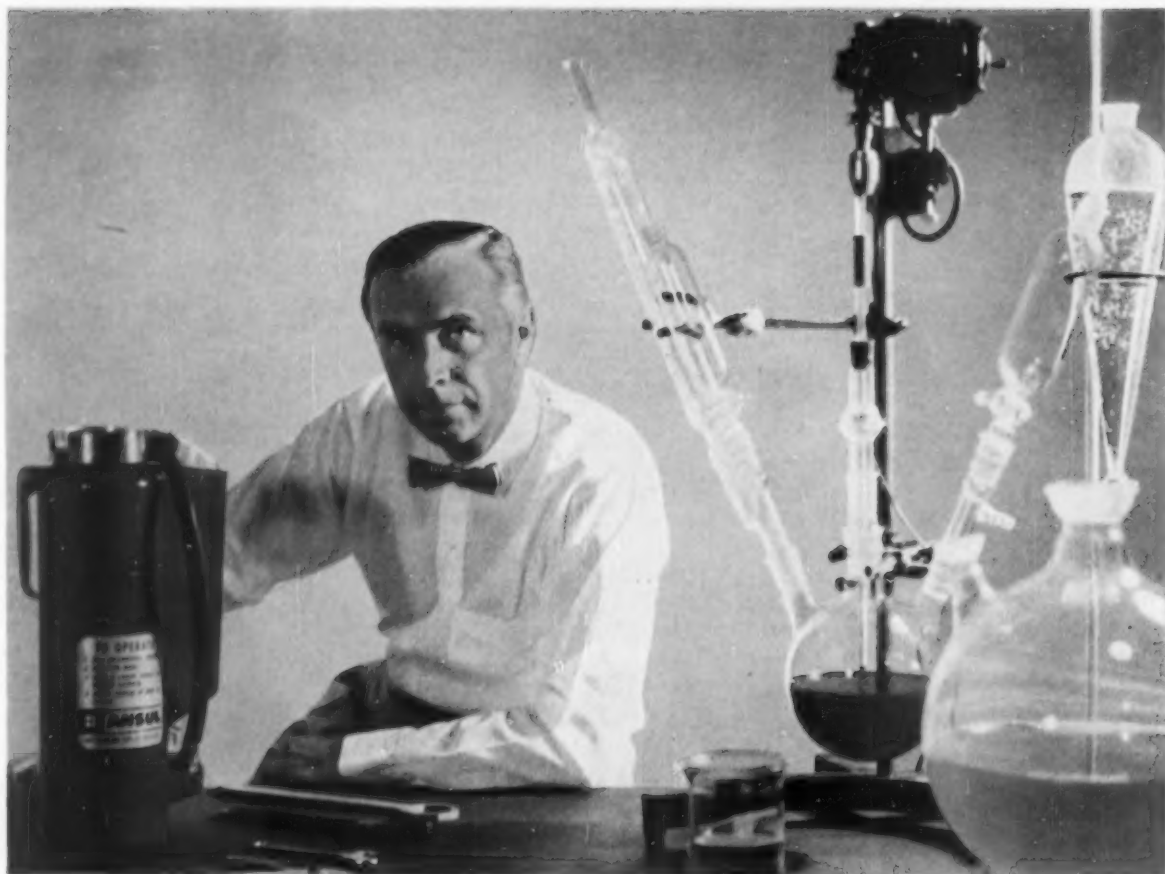
I THE MANUFACTURERS NATIONAL BANK OF TROY
Troy Amsterdam Corinth Wells

J CHAUTAUQUA NATIONAL BANK OF JAMESTOWN
Jamestown Falconer South Dayton
Cherry Creek Westfield

K AUBURN TRUST COMPANY
Auburn Port Byron

L NYACK BANK AND TRUST COMPANY
Nyack

M THE FARMERS NATIONAL BANK AND TRUST COMPANY
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FIRE AND ICE—Ansul combines chemistry and mechanics in such apparently unrelated fields as fire extinguishers and refrigeration systems.

Got a chemical problem with a mechanical twist? Call us at Ansul



CHEMISTRY AND MECHANICS combine to produce Ansul dry chemical fire extinguishing equipment.



ANSUL'S NEW T-FLO DRIER for refrigeration systems typifies chemistry and applied mechanics at work.

When you turn a problem over to Ansul, you get two kinds of specialists working on it right away. For here, the engineer and chemist team up to "package" chemistry for industrial use. Let's examine two of Ansul's chemical-mechanical achievements.

The fire extinguisher typifies the joint contribution of chemist and engineer. Today, Ansul dry chemical equipment—portable and piped systems—stands at the head of its class in fighting Class B (flammable liquid) and Class C (electrical) fires.

Similar teamwork recently produced exciting new developments in refriger-

ation driers. Ansul chemists created Andrite, a new and better drying agent. Ansul engineers created the T-Flo principle which makes the drier easier to install and replace—and the Dry-Eye moisture control system which signals whether refrigerant is wet or dry with changing colors.

If you have a chemical problem that calls for a mechanical solution (or vice versa), give us a call—we're always at your service—or write: THE ANSUL CHEMICAL COMPANY, Marinette, Wis.

Ansul, pioneer manufacturer of Fire Extinguishing Equipment, Refrigerants, and Mechanical Refrigeration Products, Industrial and Fine Organic Chemicals.



ANSUL

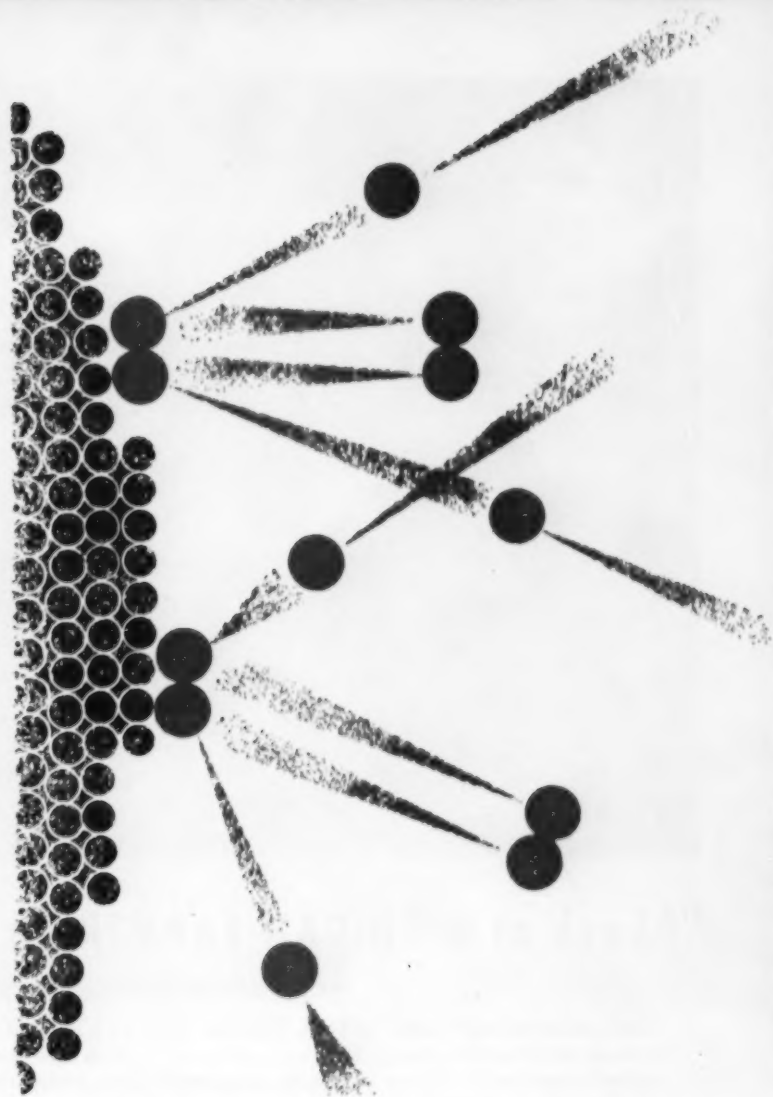
RESEARCH

● Industry is using CATALYSTS more and more for a fast-widening variety of jobs. But nobody yet knows for sure how a catalyst encourages two separate MOLECULES to react and produce a new substance.

● Most promising theory (represented at right) is that molecules of two reacting substances are attracted to the surface of the catalyst. They apparently stick to that surface momentarily, react, then fly off leaving the catalyst ready for another round.

● Proving the theory will take long-term basic research program. But medicine as well as industry has a mighty stake in solving the problems.

● That's why science sees . . .



In Catalysts, a Rich Promise

Billions of dollars worth of the U. S.'s industrial production—gasoline, chemicals, synthetic rubber, plastics—depend from a standpoint of economics on the work done by catalysts. Every year, more new products are added to the list of the catalysts' dependents.

The odd thing is that nobody yet knows precisely how catalysts—those chemicals that produce fast changes in the structure of other substances—do their work.

• **Art Into Science**—For a decade and more, the task of finding catalysts that will produce the changes that industry requires has been almost an art. It has depended largely on the industrial researcher's intuition, on trial-and-error tests, on laborious searching.

But now the job is quickly becoming a science. Research is bearing down hard on the mysteries of the catalytic process. The aim of the researcher is

to solve all those mysteries. And one of the main promises of a successful solution is that industrial scientists, working then in a firmly defined field, will be able to compound a vast range of new products through their ability to predict in advance the catalysts that will change the character of known substances.

The time when that promise may be fulfilled appears to be a good deal closer than was previously thought. The research being done in the field of catalytic reaction indicates that.

I. What They Do

Scientists—and most laymen—have long known what a catalyst can do. Here's one easy-to-understand example:

If you place a piece of natural protein—a beefsteak, for instance—in a solution of concentrated, 20% hydrochloric acid,

the protein will react and dissolve completely in the strong acid. But it may take several days to dissolve.

If you place the same piece of steak in a vat of boiling concentrated acid, it will dissolve in a single day, for chemical reactions normally speed up when you raise the temperature of the process.

• **Speedy Catalyst**—But there's another way of dissolving the steak—without using heat and without long delay—and that is to use a catalyst. If you add a pinch of the chemical compound pepsin to the concentrated acid, the steak will dissolve in three or four hours. Pepsin is the catalyst; in very small amounts it will speed up the reaction, yet it won't lose its character by mixing with the protein or the acid, and it won't combine with either of them.

Other catalysts, in other reactions, do much the same kind of job. In still other cases, it's only because of the cata-



"I Look at MICHIGAN FARMER First,"

says Herb Gettel, Huron County, Michigan

Twice every month 9 out of 10 Michigan farm families take time out to read MICHIGAN FARMER. They've come to depend on this home-edited magazine for sound advice, for examples that can be turned to advantage and profit, for up-to-date county and state farm news.

Coverage . . . readership! Here are two powerful reasons for picking MICHIGAN FARMER to carry your sales message. Now, Reason No. 3: big, year-around *buying*. Diversification is practiced here on a wider scale than in any other state. It's responsible for Michigan's high, even-keel income right around the calendar.

And, Reason No. 4: MICHIGAN FARMER is economical, roto-gravure printed (in full color, if desired) to save the cost of plates. But, why not add two other big, steady farm markets, Ohio and Pennsylvania? They're served by equally popular magazines, THE OHIO FARMER and PENNSYLVANIA FARMER. A post card will bring the facts on all three—promptly. Write 1010 Rockwell Avenue, Cleveland 14, Ohio.

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Harrisburg, Pennsylvania

"... the catalyst's behavior appears to be one of the most complex in the field of solid state physics . . ."

STORY starts on p. 141

lyst's chemical effect that reaction takes place at all. Even high temperature and high pressure won't change the character of the molecules, as the catalyst is able to do.

II. Why Do They Work?

Yet science still has no sure answers to the questions of exactly why and how catalysts work these tricks.

One reason for this gap in scientific knowledge is that a catalyst's behavior appears to be one of the most complex reactions in the whole field of solid state physics. That, anyway, is the explanation given by Dr. Robert G. Breckenridge, director of National Carbon Co.'s new basic research laboratories at Parma, Ohio (BW-Sep.22'55,p129).

• **Typical Reaction**—Breckenridge and other scientists most advanced in catalytic research generally agree that the reaction of ethylene and oxygen in the presence of a catalyst is a typical one. In this reaction:

- Separate molecules of ethylene and oxygen, in solution, are attracted to the solid catalyst.

- The molecules stick to the surface, react, and join together to form ethylene oxide.

- The molecules, now linked together, fly off the catalyst's surface.

- And that point on the surface of the catalyst where the reaction took place is left free for a further reaction.

All this happens in a fraction of a second, and continues until all available ethylene and oxygen molecules have been combined. And the presently accepted theory of why the reaction takes place is that the solid catalyst's electronic structure attracts the separate molecules to its surface, encourages them to react, and then pushes the freshly linked molecules away.

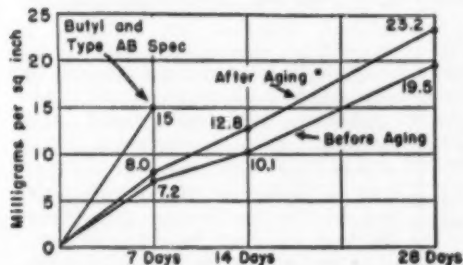
- **Proving the Theory**—The first step in proving the theory is to concentrate on a simple reaction (such as the reaction between ethylene and oxygen molecules), and then slow it down. And, since low temperatures will slow the reactions, catalytic researchers are watching closely the experiments (page 152) that are being made at temperatures so low that helium gas becomes liquid (about -454F).

At the temperature, oxygen atoms, for example, will "stay put" and not react with other atoms. Then if the temperature is raised slightly, catalytic reactions between oxygen atoms and

Amazing moisture resistance of Anaconda's Type AB butyl high-voltage insulation helps reduce failure due to moisture.

When you can't keep cable out of moisture New insulation keeps moisture out of cable

Exceptional moisture resistance is provided by Anaconda Type AB butyl insulation.



RESULTS OF mechanical moisture absorption test show Type AB retains good moisture resistance even after aging.

Where rubber-type cable is installed in underground ducts or buried directly in the earth, the moisture-resistance properties of the insulation are vitally important.

Latest facts show Anaconda's Type AB butyl high-voltage insulation absorbs far less moisture than industry standards permit. For the mechanical moisture absorption test, the industry has regarded 15 milligrams increase in weight per square inch of exposed surface, after 7 days' immersion at 70C, as a criterion for satisfactory moisture resistance. Type

AB easily meets that requirement — in fact, typical results show it absorbs less than 7.2 mg. in 7 days.

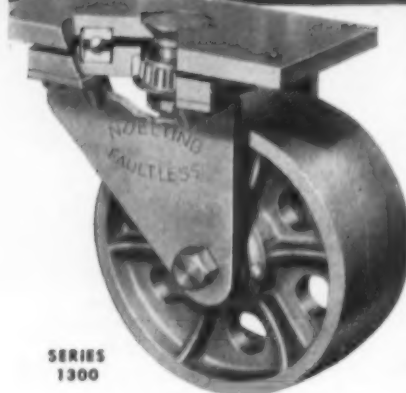
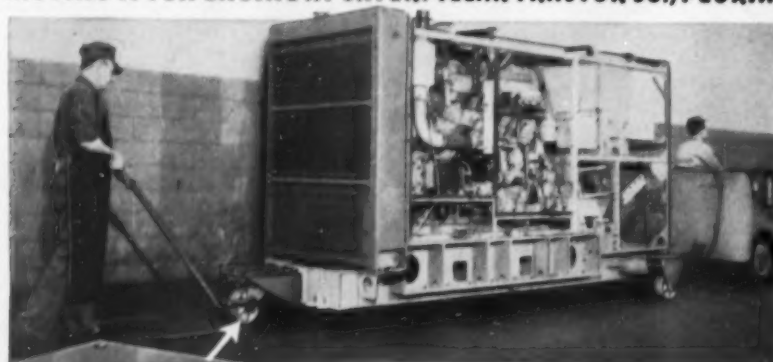
New Engineering Bulletin EB-27 gives you full details on performance of Type AB insulation in 15 Industry Specification tests. Ask the Man from Anaconda for your copy. Or write: Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.

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ASK THE MAN FROM **ANACONDA**
—PIONEER IN BUTYL INSULATION

NOELTING Faultless CASTER MATERIALS HANDLING FACTS

MOVING 11 TON ENGINE AT CATERPILLAR TRACTOR CO., PEORIA



SERIES 1300

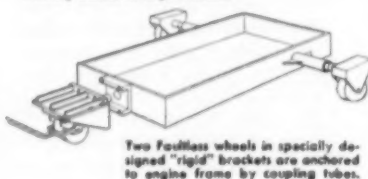
The FAULTLESS No. 1306-10 Extra Heavy Duty Caster like those used by Caterpillar Tractor Co., Peoria, Ill., on their heavily loaded transfer car.



SWIVEL LOAD BEARING
4 1/2" diam.
self-contained,
dust-proof, with
1/2" diam. balls in
hardened, ground,
polished raceway.



THRUST BEARING
Fits firmly in horn
top plate.
Unit is
interchangeable
with wheel bearings.



Maintaining a continuous production-line flow of 22,000 lb. Diesel-electric sets at the Peoria plant of Caterpillar Tractor Co. is accomplished with the aid of Faultless Dreadnaught Casters. Supported on one swivel plate caster, Faultless 1300 Series, and two Faultless wheels in special mountings, the engines are moved a total of approximately 100 feet past production stations situated about 20 feet apart. A small industrial truck pulls the 22,000 pound assemblies through the production area. One man guides the individual units with an ingeniously designed steering arm arrangement on the swivel caster.

Another unusual materials handling achievement for men in industry, made possible by Faultless Casters.

Diagram shows how Caterpillar engines attach Faultless 1306-10 casters and two Faultless special alloy, roller bearing wheels to engine frame.

Castered equipment from tote boxes to large trucks help you keep costs down in your plant. Whether you need to move 50 pounds of delicate instruments or 15 tons of sheet steel, Faultless makes the casters to best do the job.

Competent engineers, a modern factory, and skilled personnel combine to furnish you the dependable casters you need for your individual operation. Factory-trained representatives and selected distributors are on call to help solve your materials handling problems.

FAULTLESS CASTER CORPORATION EVANSVILLE 7, IND.

Offices in Atlanta, Baltimore, Boston, Buffalo, Chicago, Cleveland, Dallas, Detroit, Grand Rapids, High Point, Indianapolis, Los Angeles, New Orleans, New York, Philadelphia, Portland, Seattle, St. Louis, Canada: Stratford, Ontario.



"... medical researchers know little about the action of enzymes—the catalysts of the human body..."

STORY starts on p. 141

other atoms will take place slowly. Researchers have to see these "slow-motion" reactions before they're able to gain much understanding of them. Yet the areas they must see are measured in billionths of a billionth of a square inch.

• **Getting in Focus**—Two promising new instruments bring so small an area within the range of human sight:

• The electron field emission microscope, which can magnify up to 5-million times, is being used to study the motion of atoms across the surfaces of catalysts, and the forces required to (1) make the atoms stick to the catalyst's surface, and (2) drive them away once they're linked.

• The ion emission microscope, which can magnify up to 50-million times, is being used to determine exactly what molecules or atomic complexes will form on the surfaces of particular catalysts.

III. A Promise for Life

Using these two new and powerful aids, catalytic researchers are hurrying to give industry the answers it would like to have. And they're being pushed on by experts in medical research.

Medicine is vitally interested in an explanation of precisely how catalysis works because the human body—like an up-to-date chemical plant—employs catalysts all the time to keep itself going. Medical researchers, like their counterparts in industrial research, know little about these catalysts, which, in correct terminology, are called enzymes.

• **Key to Cancer**—But the dean of catalytic scientists, Dr. Eugene J. Houdry, says that enzymes hold the key to cancer and to the deterioration of the body by aging. Enzymes—the body's catalysts—promote the transformation of food into energy, and when they change their basic make-up they can lead to production of cancerous cells and deterioration through aging. Houdry told the First International Congress on Catalysis, in Philadelphia this month.

Houdry, who developed the method of catalytic cracking of petroleum to form high-octane gasoline, says there's close similarity between the organic enzymes of the human body and their inorganic counterparts, the industrial catalysts.

• **Restoring Life**—It's already known that the life of an industrial catalyst

Letters molded of colored PLEXIGLAS are used for outdoor signs because of time-proved resistance to weather.

Molded PLEXIGLAS cover of new TapLite wall switch is strong and crystal-clear, snaps into place after push button and decorative inserts.

Trough and intricate loading heads of this capsule filling machine are molded of PLEXIGLAS to critical tolerance specifications.

designed with **PLEXIGLAS** in mind

Shown above are just a few of the widely varying uses to which PLEXIGLAS acrylic plastic molding powder is being put today. Whether an application calls for rugged durability or gleaming beauty, or both, more and more designers and molders are finding that PLEXIGLAS is the material to use for best results. Here is the combination of advantages it offers:

- resistance to weather, breakage, heat, discoloration.
- ability to be molded accurately into complex shapes.
- brilliant colors, or water-white transparency that gives depth and sparkle to back-surface paints and metallized coatings.
- optical properties that make possible new designs in lighted moldings.

Our technical representatives and Design Laboratory staff would like to show you how PLEXIGLAS can solve specific problems involving molded plastic parts.



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Lighting by **DAY-BRITE** makes the big difference



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can be prolonged or restored to proper working order through regenerating, replacing, or increasing its oxygen.

So, Houdry maintains, it ought to restore human body enzymes. The day when that can be done mechanically shouldn't be too far distant, he says.

• **Cleaner Air**—Compared to that promise, other possible results of the successful explanation of catalysis may seem inconsequential.

But also apt to be solved when scientists are able to tailor-make catalysts to suit a particular problem is the problem of air pollution.

Oxidation catalysts are capable of initiating burning of fuel mixtures that would not normally be combustible. They'll support combustion of mixtures that are too dilute or too cold to be ignited by flame. Therefore, that means that they can be used not only to recover heat from the waste gases of industrial plants, but to rid the fumes of gasoline engines and industrial smokestacks of materials that pollute the air.

The latest find in this field is the development of an oxidation catalyst that burns the hydrocarbons in leaded gasoline, converting them into harmless products before they reach the atmosphere.

But what's needed before industry begins to get the benefits of all the other promises inherent in the work of catalysts is a spell of powerful basic research. And that's just what appears to be under way now.



It Spots Radiation

Gamma radiations from atomic or hydrogen explosions, or any other radioactive source, can be spotted by this pen-sized "dosimeter," developed by Bendix Aviation Corp. for the Army Signal Corps. The rugged little dosimeter can spot gamma radiations of up to 600 roentgens—first signs of radiation are produced in humans by 100 roentgens.



"There stood our Founder—up to his knees in peas"

"If I'd laughed, I'd of been fired on the spot.

"But it was about the funniest thing I'll ever hope to see. There stood our usually dignified Founder, just about smothered in fresh green peas. And more coming.

"I knew in a flash what had happened. The power supply cable for the whole production line had conked out. The hullers are on a separate circuit, and they were still working like mad.

"I guess I did have a sort of I-told-you-so look, but I couldn't help it. Y'see, our Founder really knows the quick-freeze business, and coined that phrase 'cuddled from bloom to shipping room' that sells millions of boxes of frozen peas every year. One thing he *doesn't*

know beans about (excuse me, I mean peas) is power cables, and the last time I requisitioned Okonite cables, which I've been buyin' for twenty years, he wrote, 'Disapproved. Buy Zilch cable.' I found out later that this guy Zilch makes cable of a sort, and he and our Founder were frat brothers at State back in '09.

"Anyway, to make a long story short, when I got our Founder out of those peas he sputtered, 'Take those Zilch cables out! Every inch—and get that Okonite stuff you always bought!'

"Well, I don't guess we'll have any more excitement like that for a long time, cause you can really count on those Okonite cables. But it was fun while it lasted."



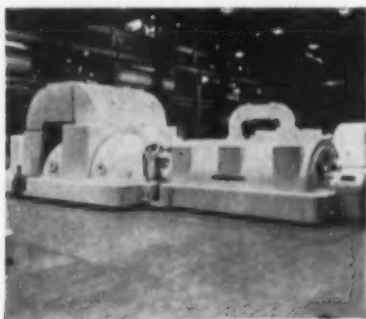
where there's electrical power

...there's **OKONITE CABLE**

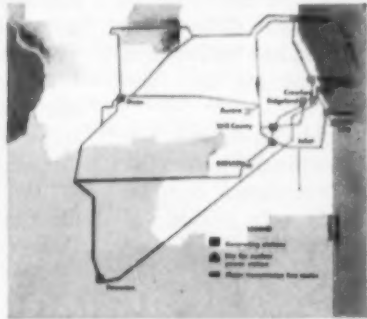


1 John W. Evers, president (left), and J. Harris Ward, executive vice president (right), of Commonwealth Edison Company, Chicago, Ill., standing next to model of proposed Dresden Nuclear Power Station—to be built with private capital at a cost of \$45 million. Commonwealth Edison will pay \$30 million, plus cost of site and overhead. Remaining \$15 million is to be paid as a research

and development expense by the eight power companies in the Nuclear Power Group, Inc.: American Gas and Electric Service Corporation, Bechtel Corporation, Central Illinois Light Company, Commonwealth Edison Company, Illinois Power Company, Kansas City Power & Light Company, Pacific Gas and Electric Company, and Union Electric Company.



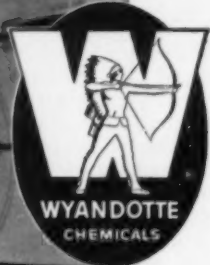
2 Giant turbines and generators at Commonwealth Edison's Ridgeland Power Station create power by means of steam. To prevent algae growth in the condenser tubes, Commonwealth Edison treats condensing water with Wyandotte Chlorine.



3 Commonwealth Edison's network of power stations serves many residential, rural, and industrial areas. Wyandotte Chemicals are at work here, too—in the pulp and paper, glass, rubber, petroleum, chemical industries, to list only a few.



4 Commonwealth Edison powers the printing presses at R. R. Donnelley & Sons Co., Chicago. PURECAL,* Wyandotte's ultra-fine precipitated calcium carbonate, lends brightness, smoothness, and opacity when used as a coating for printing papers.



John W. Evers tells how
Commonwealth Edison is preparing to supply

atomic muscles for electric power

"The construction program of America's electric companies in the postwar years has been greater than that of any other industry," says John W. Evers, president of Commonwealth Edison Company.

"This, in itself, is a remarkable achievement. But, even *more* remarkable is the fact that, during the past quarter century, the cost of electricity to consumers has been reduced an average of 37%.

"Now Commonwealth Edison, with seven co-sponsors, is stepping out in an entirely new field . . . electric power from atomic fission.

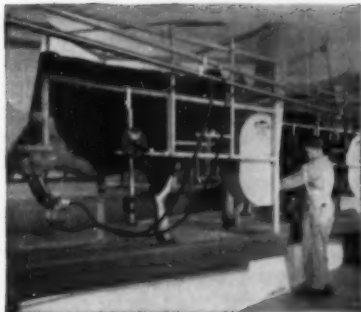
"The project — the new Dresden Nuclear Power Station, located about 50 miles from Chicago — *is the largest all-nuclear power plant yet scheduled. It is being built entirely with private funds, at a cost of \$45 million.*"

Wyandotte is proud to salute all the companies co-operating to harness electricity from the atom. Such positive, progressive action is in keeping with the American tradition of free enterprise. Wyandotte is a supplier of basic chemicals to Commonwealth Edison, and to important companies in practically every industry. May we serve you? *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

*REG. U.S. PAT. OFF.

Wyandotte CHEMICALS

Organics, Inorganics — World's largest manufacturers of specialized cleaning products for business and industry



5 Illinois dairy farmers depend on electricity to milk their cows. Compounds for dairy cleaning, can washing, and bottle washing use Wyandotte surfactants like KREELON® and the PLURONIC® series for their penetrating and rinsing properties.

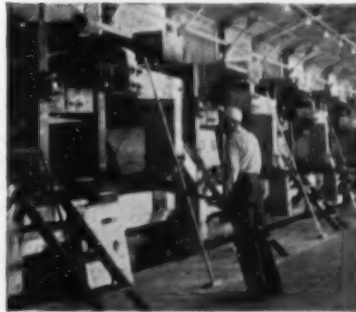
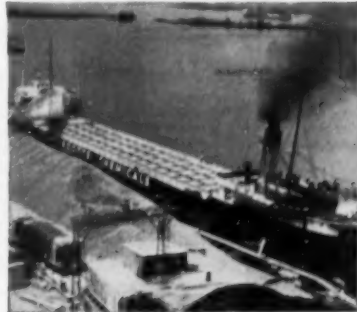


PHOTO COURTESY ALUMINUM COMPANY OF AMERICA

6 Power industry is one of many that use Wyandotte Soda Ash and Chlorine. For instance, soda ash is used to refine bauxite for use in the aluminum-smelting process, which is shown above; chlorine to extract copper, lead, zinc from mixed ores.



7 Wyandotte freighter fleet transports limestone from company-owned mines. Ownership of natural resources assures a constant supply of essential chemicals . . . a good reason to call on Wyandotte as a dependable source for chemicals.



WOOD PANELING FOR PERMANENT BEAUTY

That's one of the extra nice things about wood paneling—the beauty is permanent. No elaborate maintenance. Once the paneling's in place, it just grows more lovely every year. No annual redecoration costs and inconvenience.

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Korina® and teak, to familiar species like oak, walnut and birch. (Above, the President's dining room of the Philadelphia National Bank has walls of American cherry.) You ought to find out how Weldwood real wood paneling can brighten your offices. Send for the "Weldwood catalog" for full information.

Weldwood® WOOD PANELING



UNITED STATES PLYWOOD CORPORATION, Dept. BW9-29, 55 West 44th St., New York 36, N. Y.



Self-Dumping Hopper increases plant efficiency

Handling costs have been cut sharply and plant efficiency has been increased for Henning Brothers & Smith, metals refiners, Brooklyn, N. Y. Bulk materials handling is now standardized by using nine Roura Self-Dumping Hoppers—doing several different jobs throughout their plant. These maintenance-free Hoppers, attached in 3 seconds to any standard lift truck, dump aluminum

scrap into furnaces, move 400-600^{lb} zinc ingots to a storage area, and are loaded with hot brass ingots from a conveyor belt. In each job, the entire operation is handled by one man. He just flips the latch and the Hopper dumps itself, rights itself, and locks itself.

Why not let Roura Self-Dumping Hoppers cut costs and save time for you, handling hot or cold, wet or dry bulky materials.

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ROURA IRON WORKS, INC.
1407 Woodland Ave., Detroit, Michigan

RESEARCH BRIEFS

Atlantic Refining Co. scientists reported at last week's annual meeting of the American Chemical Society at Atlantic City, N. J., that they have been successful in synthesizing gasoline by use of atomic energy. The company claims that this is the first tangible result of the industrywide effort to use atomic energy for refining petroleum instead of the usual methods involving heat, pressure, and catalysts (see story p. 141). Research is continuing to see whether the process can be made commercially feasible.

Curtiss-Wright Corp. and the Air Force have succeeded in jointly developing a rocket with the unprecedented take-off speed of 5,000 mph. within two seconds of launching. The rocket is a two-stage rocket, 10 ft. long, fired from a portable launcher.

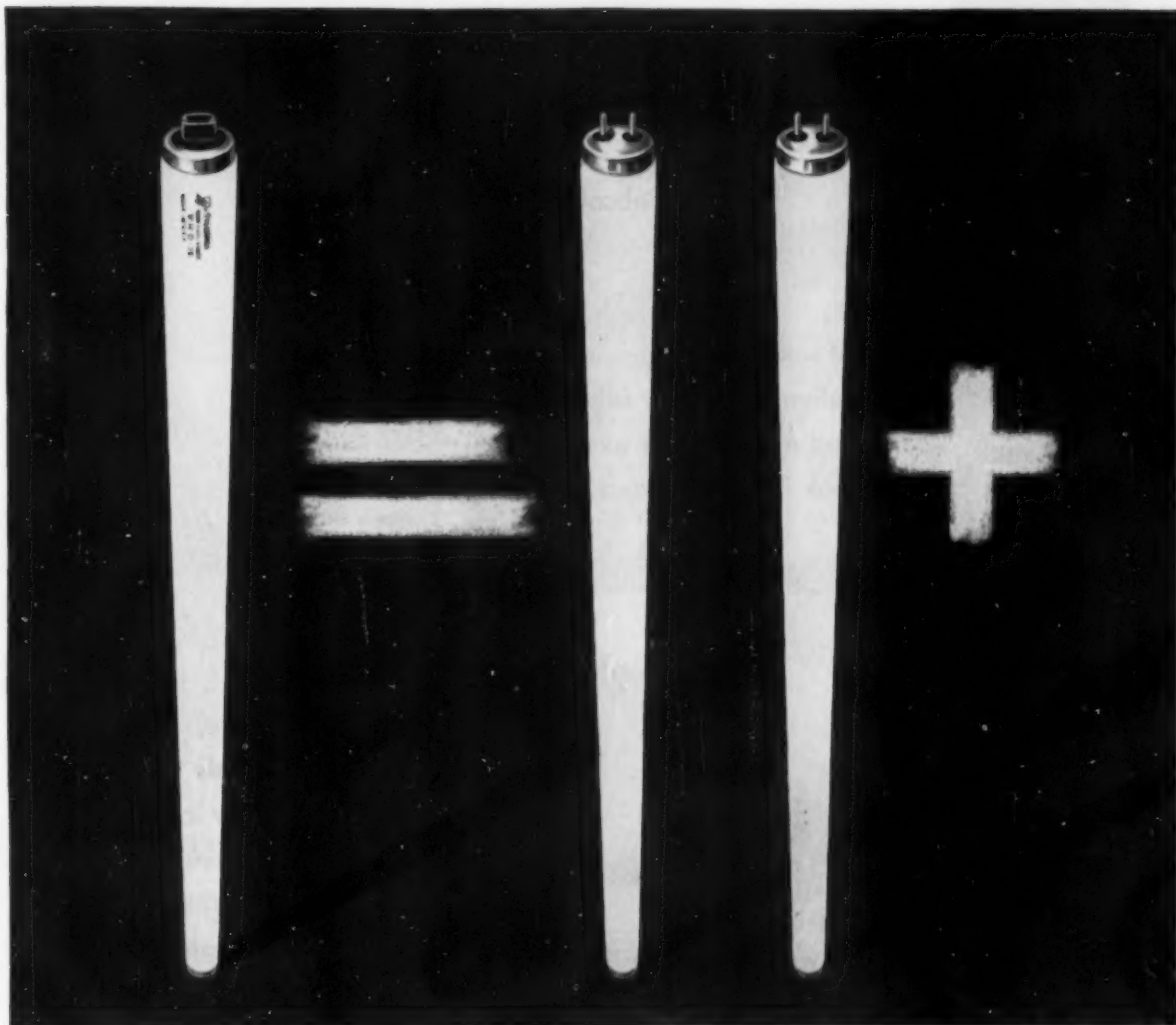
Chemical compounds can be formed in a gas discharge on a commercial scale, says Lord Mfg. Co., of Erie. In the new Lord method, gas phase chemical reactions can be carried out in a luminous high-frequency electrical discharge. The development is particularly suited to chemical syntheses that have been difficult or impossible to carry out up to now.

A new twist in coffee breaks is held each afternoon at Midwest Research Institute, Kansas City, Mo. Some 200 members of the staff have a light snack of irradiated food. The object is to find chemical additives to protect flavor during sterilization by radiation.

A nozzle lining for rapid-fire anti-aircraft rockets, to withstand extremely severe erosion from exhaust gases, is being sought at Battelle Institute. The Army Ordnance Corps' Picatinny Arsenal is sponsoring the project.

Asphalt can be combined with refinery-byproduct hydrogen to make a long list of products including gasoline, heating oil, oil suitable for catalytic cracking, and residual fuel oil, says Humble Oil & Refining Co. Humble believes its new process can be installed and operated on an economic basis for various applications.

Want to rent a gamma ray producer? AEC says it is ready to make available spent fuels from its material testing center at Idaho Falls. The cost to researchers will be \$100 a year for each fuel element, plus handling and transportation charges. Hitherto, labs have generally had to acquire their own particle accelerators, at a cost running into five figures.



Light from "VHO" (left) more than doubles early models

Sylvania research makes 1 equal 2 *plus!*

Now Sylvania scientists have solved another major lighting problem. Their research has raised the light output of fluorescent lamps so that they can be used effectively in such *big* installations as superhighways, streets, parking lots, shopping centers.

Called "VHO" for Very High Output of light, the new Sylvania lamp—in the 4-foot length, for example—produces more than double the light of predecessor models. And its new principle has launched Sylvania scientists on the path to lamps of still higher performance.

Sylvania's nearly 2,000 scientists and engineers and many thousands of technicians are constantly pioneering in new fields. In 45 plants and 18 laboratories, in 42 communities, they are developing new techniques and finding better ways of doing more things for more people—in *lighting, radio, electronics, television, atomic energy*. Sylvania Electric Products Inc., 1740 Broadway, New York 19, New York; Sylvania Electric (Canada) Ltd., Shell Tower Building, Montreal, P. Q.; Sylvania International Corporation, 14 Bahnhofstrasse, Coire, Switzerland.



SYLVANIA

LIGHTING

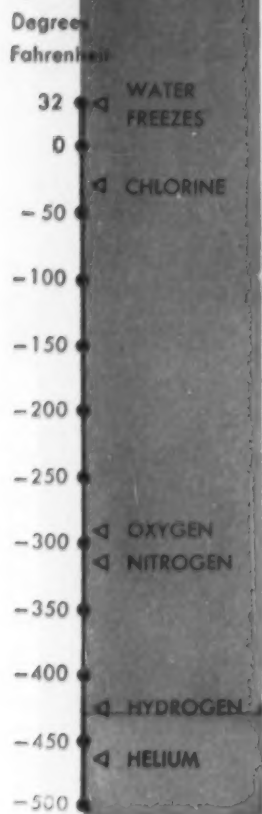
RADIO

ELECTRONICS

TELEVISION

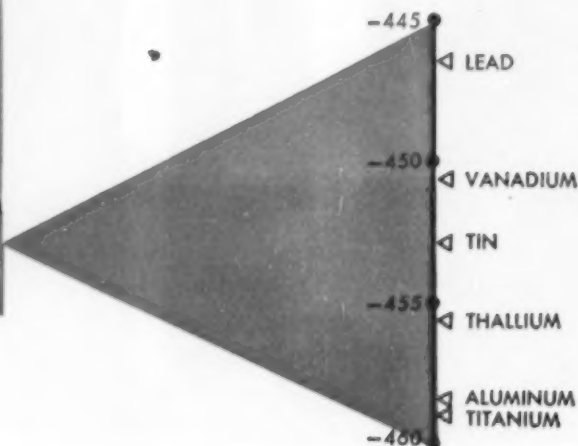
ATOMIC ENERGY

-459F



1 Cryogenics (low temperature) research deals with temperatures ranging down to absolute zero, or -459°F .

2 At -450°F (the temperature of liquid helium) all other substances are solid. Oxygen and nitrogen, for example, look like white sand.



3 In this temperature range, certain metals become super conductive, carrying electricity with little or no resistance. This has exciting potentials to the electrical industry.

Hot on a Very Cold Trail

Researchers are beginning to show some real interest in what happens to matter at temperatures so low as to be almost inconceivable to the average person. This field of study—known as cryogenics—is fairly new, although scientists have known about “liquid air” as far back as the early 1900s. The temperatures involved range down to a few tenths of a degree above absolute zero, which is equivalent to -459°F . By comparison, the -90°F once recorded in the frigid wastes of Siberia seems almost warm.

• **Stepped-Up Research**—While the first appointment of a professor of cryogenic engineering was only made in 1949 (at MIT), today low temperature research is being conducted at

more than 100 laboratories across the nation. And researchers are becoming more enthusiastic about the possibility of the commercial application of various low-temperature phenomena. Some actually believe that the day when low-temperature techniques will be widely applied in certain fields of instrumentation, such as automation and computers, is no more than a few years off.

I. Strange Phenomena

When you get down to temperatures in the range of -540°F all sorts of unusual things happen to matter:

• At about -452°F , the point at which helium liquefies, all other sub-

stances are solid, and oxygen and nitrogen—in appearance and mechanical behavior—act like white sand at ordinary temperatures.

• The strength of low-carbon steel at -450°F increases five times over its strength at ordinary room temperatures. At the same time, it becomes extremely brittle.

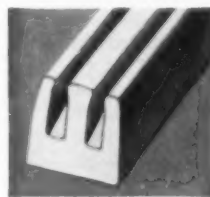
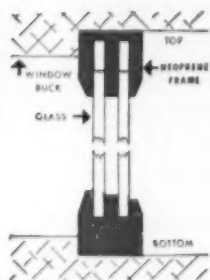
• At -450°F , certain dielectric materials, such as sapphire, attain a thermal conductivity 60 times that of copper at ordinary temperatures.

• Certain metals—gadolinium is one—whose magnetic properties are not normally unusual become many times more ferromagnetic than iron when they are cooled to -450°F .

• And, of great importance to



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The Silent Glide Corporation of Garfield, New Jersey, had an idea for a new, improved sliding window*—just as you might have an idea to improve your own product. Previous window construction relied on channel strips that warped or corroded unless painted regularly. Silent Glide's idea was to eliminate costly maintenance yet produce a snug, weather-tight window that would operate smoothly for the life of a building.

This manufacturer called in the technical representative (man in red, above) of his rubber-goods supplier. Working together, they selected Du Pont neoprene as the material to use for the channel strips of the new window.

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the electrical industry, certain metals become superconductive—almost completely lose their resistivity to electricity—at -450°F .

• **Superconductivity**—The phenomenon of superconductivity, of course, is not a recent research discovery. As far back as 1911, the Dutch physicist Kamerlingh Onnes discovered in mercury the first example of the complete disappearance of electrical resistance in a metal reduced to exceedingly low temperatures.

Today we know a great deal more about the properties of superconductors. And to the long list of such metals, many new materials are constantly being added.

But researchers are hard put to explain in precise scientific terms exactly what superconductivity is. The problem ranks with the nature of nuclear energy as one of the major puzzles confronting the theoretical physicist.

• **Hitting a Low Degree**—Basically, the problem of obtaining ultra-low temperatures for research purposes has been solved. Most low-temperature experiments today are conducted in either liquid nitrogen (which liquefies at about -321°F) or in liquid helium (which liquefies at about -452°F). Both are liquefied by essentially the same process. You compress the gas (to about 200 psig in the case of helium), precool it by means of heat exchangers, and then allow it to expand. The expansion cools the gas to the point where it liquefies.

II. The Possibilities

Scientists haven't yet been able to take advantage of low-temperature phenomena on any widespread commercial basis. But researchers working in this field excitedly feel that the breakthrough on large-scale use of low temperatures will come very soon. In certain specialized fields, they point out, it has already arrived. These fields include gas separation and liquefaction—both of which have been using low temperature application techniques for many years.

And, more recently, low-temperature techniques have played an important role in thermonuclear developments. Also, special containers, whose temperatures can be maintained within a few degrees of absolute zero for hundreds of days, are now in wide use.

But these uses are just a sample of what's possible. While low temperature techniques may someday be applied to heavy electrical equipment, a number of other applications are probably more imminent.

• **Heavy Water Distillation**—There's a good chance, for example, that the deuterium (heavy hydrogen) needed for fast-breeder power reactors will

soon be produced through the low temperature distillation of hydrogen. Now it's distilled from water by a more costly process.

Hydrogen, in nature, contains one double atom in every 300. The double atom must be separated out, reacted with oxygen to form heavy water. Because the problems of distilling this double hydrogen atom from ordinary hydrogen atoms seemed like a formidable task, the Atomic Energy Commission, during World War II, decided to distill it from water instead.

Now, the National Bureau of Standards has in the design stages a plant that will produce 45 lb. of heavy water a year through low-temperature hydrogen distillation at a fraction of what it costs to distill whole water. This development could be a vital factor in the establishment of commercial atomic power plants, since up to one third of the capital outlay for an atomic power plant reportedly goes into heavy water moderators.

• **Meteorological Aid**—A low-temperature development of more limited use is a low-cost, lightweight liquid hydrogen "dewar" that replenishes gas lost from high weather balloons in flight—thus extending the balloon's voyage by as much as 10 days. (A dewar is a vessel prepared and insulated in such a way that it holds liquid gases without evaporation loss.)

The new development was described at the Bureau of Standard's cryogenic conference at Boulder, Colo. The dewar weighs 350 lb. and this limits its application to the huge high-altitude Moby Dick balloons designed to test jet streams and weather up to 100,000 ft. But as a means of increasing the balloon's gas supply, it is a distinct advance in meteorological research. And there are indications that the developer of the new dewar, Cambridge Corp. under contract to the Air Force Cambridge Research Center, may be able to adapt it to other uses soon.

• **Transportation of Gas**—Low-temperature techniques also could become an important aid to the transportation of industrial gases in the immediate years ahead. Constock Corp., organized jointly by Continental Oil Co. and the Chicago Stockyards Corp., has, for example, been experimenting for some time with the packaging of liquefied natural gas in large tanks and transporting it from a base on the Mississippi River in Louisiana. Tanks of liquid gas could be transported by refrigerated barge much more cheaply than gas moved by pipeline to Chicago.

Transport of gaseous helium offers another potential cost-saving application for low temperature packaging techniques. Annual shipment of many thousands of tons of containers of gaseous helium from government plants at

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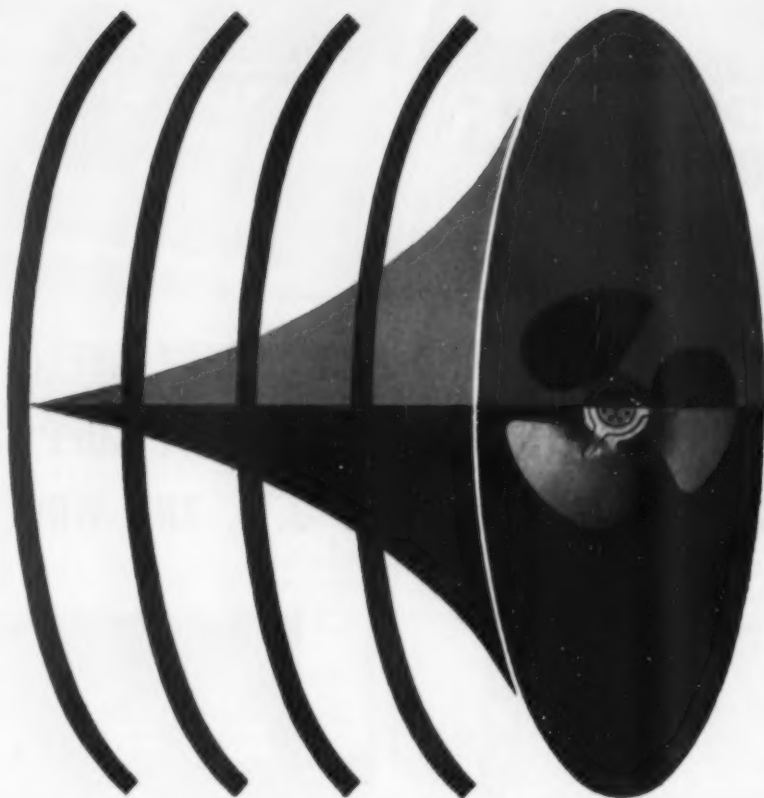
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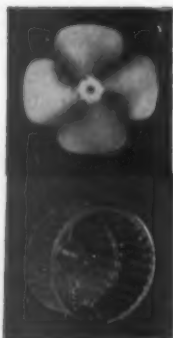
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"... continuously operating hydrogen-cooled electro-magnets are being tested at Los Alamos ..."

STORY starts on p. 152

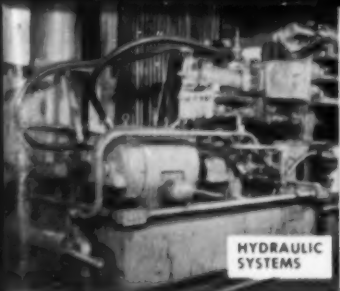
Amarillo and Excell, Texas, is a major expense item for users. Reducing the helium to a liquid would mean that industrial users could transport five to six times as much gas to their plants for the same transportation charges.

• **Permanent Magnets**—In the little more distant future lies the possibility of developing the permanent magnet on a commercial basis. This development would be based on the superconductivity of certain metals at very low temperatures. A program of designing and testing continuously operating liquid hydrogen-cooled electromagnets has been going on at Los Alamos since January, 1955. The Los Alamos scientists say copper bathed in liquid hydrogen loses all but a little of 1% of its resistivity. That makes the power gain as much as 99% and means that a power supply of 20-kw. will do the work of 2,000-kw. transmitted through ordinary room temperature cooper.

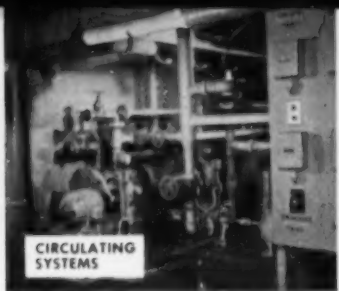
The Los Alamos researchers report that while the liquid hydrogen-cooled electromagnet is not yet ready for industrial use, it may come sooner than generally expected. That's because problems of heat transfer, coil stability and switching—even when batteries are used to supply the power—are not so thorny as anticipated. So progress from here on out could be very rapid.

• **Bearings**—Non-lubricated bearings that operated over a temperature range of from 122F to 1,292F may be another immediate industrial application of current low-temperature research. Garrett Corp. reported at the Boulder conference that their researchers have produced about 20 different types of stainless steel bearings (journal types as well as ball bearings) that use liquid nitrogen as a coolant in a Micarta container. After 400 hours of running time, the bearings appear to work perfectly—nonlubricated by ordinary means. Ordinary hydrocarbons, for example, can't be used as a lubricant at temperatures of -300F to -350F. It's the Garrett Corp's contention that the Micarta itself, under such extreme colds, may be ground off by the bearing and form its own lubricant.

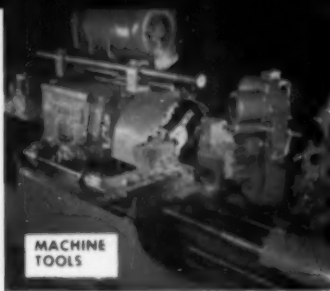
These are the most promising industrial applications that may result from low-temperature research. But they probably are only a hint of what may develop when industry begins to sink its teeth into the commercial possibilities offered by the science of cryogenics. **END**



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INTERNATIONAL OUTLOOK

BUSINESS WEEK

SEPT. 29, 1956



The movement for European economic unity is rolling again. By year's end you may see a huge free trade area begin to take shape across the Atlantic—one that includes Britain (page 34).

The push is coming from the six nations that formed the Coal & Steel Community (West Germany, France, Italy, Belgium, the Netherlands, Luxembourg). Now they are working on Euratom (a nuclear energy pool) and a six-nation customs union, called the Common Market.

The idea is to create a real mass market in Europe—and to mobilize more capital for both European and overseas development.

In a sudden reversal of policy, the British have all but decided to join the Continental countries in some sort of move to lower tariffs. The British figure that if they stay out, West German industry will take all their markets on the Continent.

You can't tell yet, though, how deep in the British are prepared to go. There seem to be two possibilities:

- A low tariff zone (including Britain and the Scandinavian countries) tied in with the six-nation customs union.
- A low tariff club for all Western Europe—one that would move toward free trade at a slower pace than the six mean to go. This is what the British want.

There's an even better chance that Euratom will get off paper by year's end. The Suez crisis, by threatening one of Europe's main energy sources, has given a real lift to the "Europeans" like Jean Monnet, founder of the Coal & Steel Community. These men are getting solid backing from both West Germany's Chancellor Adenauer and France's Premier Mollet.

It's important, though, to note the difference between Euratom and the free trade scheme. The first relies on a real surrender of sovereignty and a type of international management. The second relies on intergovernmental agreement to let trade flow freely.

There is a close similarity, for example, between the Coal & Steel Community and the proposed Euratom. But the Common Market scheme, as it has developed, has dropped the supranational principle in favor of a more traditional customs union setup.

The boom in private U. S. investment abroad has become a key factor in pushing U. S. exports—and in adding fat to the gold and dollar reserves of foreign countries. This shows up clearly in U. S. balance of payments figures for the first half of 1956, just released by the Commerce Dept.

The outflow of U. S. capital during the first half was \$680-million larger than during the same period last year. Of the increase, direct investments accounted for \$280-million.

This capital flow, according to Commerce, was the biggest factor in pushing commercial exports for the first half to an annual rate of \$17-billion and total exports to \$23-billion.

Both amounts represent new records.

Exports of coal, agricultural products, and machinery gained most. (On

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

SEPT. 29, 1956

the import side, coffee, wool, and rubber were off, but iron ore and manufactured goods were strong.)

On balance, foreign countries netted \$880-million, of which \$740-million went into reserves. Europe gained \$770-million. Total foreign gold and dollar holdings rose to \$32.5-billion—up to \$2-billion from June, 1955.

English Electric Co. won a \$12-million contract this week for turbines at the Priest Rapids Dam along the Columbia River.

The award fits with the rising volume of British machinery exports to the U. S. During the first seven months of this year they ran at the annual rate of \$78.4-million, as against a total of \$56-million for all 1955.

The increase has been largely in heavy electric goods—turbines, generators, transformers, and radio and TV transmitting equipment.

Ottawa moved in on the Soviet Embassy this week and sent the second secretary back to Moscow. The Russian was involved in an attempt to get data on Canada's new ultra-secret jet, the CF-105, which is still on the drawing boards.

The move follows a lot of grumbling in non-government circles over the methods the Communists are using to step up their trade and propaganda efforts in Canada.

The U. S. S. R. has only one less diplomat in the Ottawa Embassy than in Washington—10 times as many as it had during the Canadian spy trials of 10 years ago. Poland and Czechoslovakia also have large missions.

The Suez conflict has moved on to the United Nations stage this week. The U. N. can't solve the problem. But it could open the way for a new round of bargaining with Nasser—one that might produce a compromise settlement.

On the other hand, there may be nothing but diplomatic fencing that, in the end, would force the West to increase its economic pressure on Egypt.


As the skirmishing begins in the U. N., Nasser's position is weakening. That's not just because his personal prestige was bound to fall from its recent peak. Here are several other important reasons:

- India's Prime Minister Nehru has been shifting his ground. He is making it increasingly clear that he wants a compromise—one that's closer to Washington's terms than to Cairo's.

- Arab unity is strained. The oil-rich Arab kingdoms have warned Nasser that they don't want him to draw the Russians any further into the Middle East scene.

- Though Moscow still is backing Nasser's stubborn stand, it is holding back on economic aid. The Egyptian dictator doesn't know where he will get a half-million tons of badly needed grain, or where he will sell his 1956 cotton crop.

- Israeli-Jordan clashes threaten to undermine the recent military balance in the Middle East. The Israelis have started to exploit their military strength, presumably with the backing of Britain and France. If the clashes on the Jordan-Israeli border should lead to large-scale action, Nasser would have to risk war himself—or see his prestige tumble in the Arab world.



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Cost of Living: What's Happening to It

	Total Cost of Living	1947-49 = 100			
		Food	Clothing	Housing	
				Total	Rent Only
August, 1949	101.6	100.3	98.0	102.6	105.2
August, 1950	103.7	103.9	97.1	106.1	109.3
August, 1951	110.9	112.4	106.4	112.6	113.6
August, 1952	114.3	116.6	105.1	114.6	118.2
August, 1953	115.0	114.1	104.3	118.0	125.1
August, 1954	115.0	113.9	103.7	119.2	128.6
August, 1955	114.5	111.2	103.4	120.0	130.5
September	114.9	111.6	104.6	120.4	130.5
October	114.9	110.8	104.6	120.8	130.8
November	113.0	109.8	104.7	120.9	130.9
December	114.7	109.5	104.7	120.8	131.1
January, 1956	114.6	109.2	104.1	120.6	131.4
February	114.6	108.8	104.6	120.7	131.5
March	114.7	109.0	104.8	120.7	131.6
April	114.9	109.6	104.8	120.8	131.7
May	115.4	110.0	104.8	120.9	132.2
June	116.2	113.2	104.8	121.4	132.5
July	117.0	114.8	105.3	121.8	133.2
Aug., 1956	116.8	113.1	105.5	122.2	133.2

Data: Dept. of Labor, Bureau of Labor Statistics.

©BUSINESS WEEK

As of Aug. 15 BLS reports living costs down, factory take-home pay up. In the drive for labor votes, it provides . . .

Talking Point for the GOP

The government's monthly consumers' index dropped slightly in mid-August, for the first time in seven months. At the same time, a new rise in factory take-home pay carried it to a record high in August.

The developments could hardly have come at a better time for the Republicans in their bid for labor votes, or a more inconvenient one for union political strategists arguing against the GOP contention that workers have never had it so good.

A steady rise in monthly cost-of-living index figures, climaxed by a big jump a month ago (BW—Sep. 1 '56, p. 122), gave the Democrats and labor's Committee on Political Education a basis for charging that mounting living costs threaten to wipe out most wage gains.

The August turnaround in living costs, although small and perhaps seasonal, may lessen the effectiveness of the argument that Administration anti-inflation measures haven't worked.

• **Drop to 116.8%**—The Labor Dept.'s Bureau of Labor Statistics reported late last week that its monthly c-of-l index slipped off to 116.8% of average 1947-49 costs during the month ended Aug. 15 (table above). The index reached a record 117.0% for the month before.

Despite the drop, caused by a decline in food prices, particularly for fresh vegetables and fruits, the August index

remained about 2% higher than a year ago. Its level was the second highest on record. According to BLS, it assured some 100,000 workers under scattered "escalator" contracts 2¢ or 3¢ raises.

The next c-of-l index, for mid-September, will be due a couple of weeks before Election Day. BLS Commissioner Ewan Clague says cautiously that it could go either way by a small amount. Fresh vegetables and fruits are still dropping in price, but meat and other items in the index are edging upward.

• **Take-Home Pay Up**—While prices settled a little in August, factory workers' take-home pay rose to a record high—\$73.06 a week in net, spendable income for an average plant worker with three dependents, \$65.71 for the worker with none. Both weekly figures were about 4% higher than in mid-1955, or \$2.70 more.

Even considering the August price levels, according to BLS, the factory workers' buying power was the highest ever for the month.

• **Four-Year Picture**—To Republican campaigners—notably to Labor Secy. James P. Mitchell who is spearheading the drive for labor votes—the fractional decline in the cost of living index and the latest increase in average factory take-home are supporting evidence of a GOP-sustained economy that assures

workers "a high level of wages with steady purchasing power."

The Republicans' pocketbook arguments are based on these facts:

• Since January, 1953, when the Republican Administration took over in Washington, the BLS cost-of-living index has risen 2.2%—from 113.9% of average 1947-49 costs in mid-January, 1953, to the current 116.8%.

• During the same period, factory take-home pay rose from an average \$63.62 a week for the worker with three dependents in 1952 to the present \$73.06 a week, or 14.8%.

The result, say the Republicans, is that people are definitely better off today than at the end of 1952; while prices have risen, the inflation has cost only a part of income gains.

• **Adjusted**—For instance, Mitchell reported to the President, and the nation, earlier this month that the average factory worker "today makes almost \$13 a week more than he did four years ago, and his take-home pay after adjustments have been made for taxes and cost of living has increased by more than \$8.50 a week in the past four years."

The Democrats—and labor—admit the high level of wages, but say this has come about despite the Administration and its policies, not because of them. It's a carryover from New Deal and Fair Deal programs, they contend. **END**



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Levittown, Pa., sees brawls in a newspaper strike.

Why Violence?

Until about 15 years ago, just about every strike meant a pitched battle as pickets, police, and those who wanted to work in a struck plant struggled for control of access to the plant. Usually, whoever won control and held it won the strike. If the strikers had it, the plant was shut, and the employer eventually knuckled under. If the company and its loyal employees held it, the plant worked, and eventually the striking union knuckled under.

Now things have changed. Many companies, once a strike starts, make no effort to work. A few token pickets patrol the entrances, and there is nothing important enough at stake on the street to fight over. The modern strike—the 35-day shutdown in steel last July was an almost classic example—is a picnic compared to its precursor of the past.

The struggles and decisions have been shifted to conference rooms.

• **Still Fight**—Every so often, however, strike violence does erupt, even yet. Last year's two flagrant examples—the Louisville & Nashville RR fight and the strike at Southern Bell Telephone—made the country wonder if we weren't returning to bloody strife on the labor front. But the answer is no. As public carrier and public utility, L&N and Southern Bell were determined not to let a strike shut them down. An old-fashioned battle ensued over whether they would get in the manpower they needed to operate.

In Levittown (above) when the struck Evening Press refused to close down, and in the Chicago stockyards (below) when pickets believed workers were going into struck Swift plants, violence broke out. But few employers seem prepared to risk it, choosing instead a shutdown and negotiations.

Chicago meatpacking strikers get rough.





Packing that withstands 22,000 psi helps prevent oil well blowouts

Gushing oil wells are a rarity today. Massive "valves," located beneath the drilling platform, go into action when gas pressure threatens a blowout . . . and not a drop of the *black gold* is wasted. Performing this vital function at many wells is the Shaffer Hydraulic Cellar Control Gate made by the Shaffer Tool Works of Brea, California. Performing a vital function in the Gate is Johns-Manville Uneepac automatic ring packing used to seal around the shaft which operates the gate sealing members.

Before selecting Uneepac for this service, Shaffer engineers tested Uneepac to 22,000 psi for 30 minutes and held this pressure without a leak.

This performance as well as the compactness of Uneepac permitted them to increase the strength of the Gate walls and at the same time reduce the over-all size of the equipment.

For more than 80 years, Johns-Manville has been supplying American industry with packings and gaskets of all types. Today four modern plants assure you dependable deliveries in any quantity. And for maintenance materials, you can call on one of J-M's 400 distributors, located in all industrial areas from coast to coast. For further information, write to Johns-Manville, Box 14, New York 16, New York. In Canada, Port Credit, Ontario.



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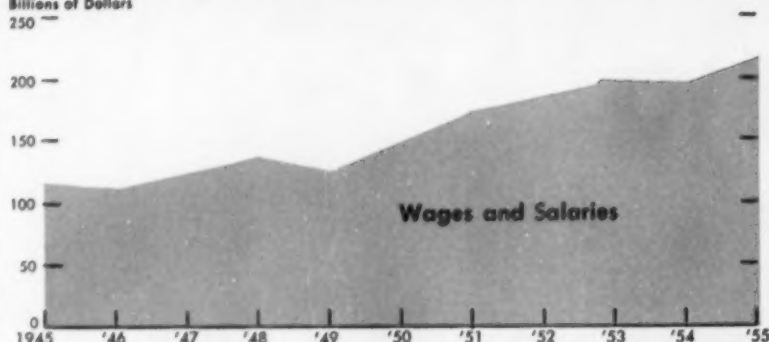
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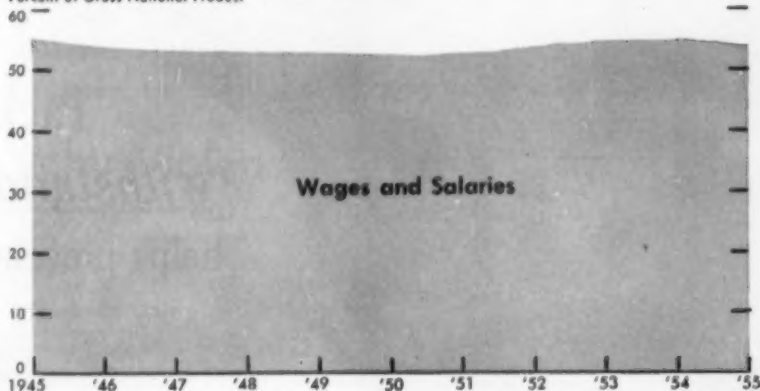
Wages have risen steadily for a decade...

Billions of Dollars



... But their ratio to gross national product stays the same

Percent of Gross National Product



Data: Dept. of Commerce.

© BUSINESS WEEK

So Labor Hits Price Rises

Were price increases warranted after the rounds of pay hikes in recent years? Yes, say employers.

No, contends the American Federation of Labor & Congress of Industrial Organizations. It insists that, generally, rising productive efficiency in industry made raises possible without any boosts in prices; instead, according to AFL-CIO, prices could have been cut in many instances.

The debate may go on this fall in a full-scale Congressional hearing sought by AFL-CIO, which says the relationship between pay, prices, and profits should be investigated as a "matter of public concern."

• **Vulnerability**—When—and if—it is, employers are expected to introduce a recent survey made by Standard & Poor's Corp., which analyzes and projects business and market trends. Made to illustrate the possible vulnerability of corporations to increasing wages, the report concludes that unless higher pay is "offset by price advances, profits are penalized."

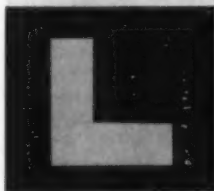
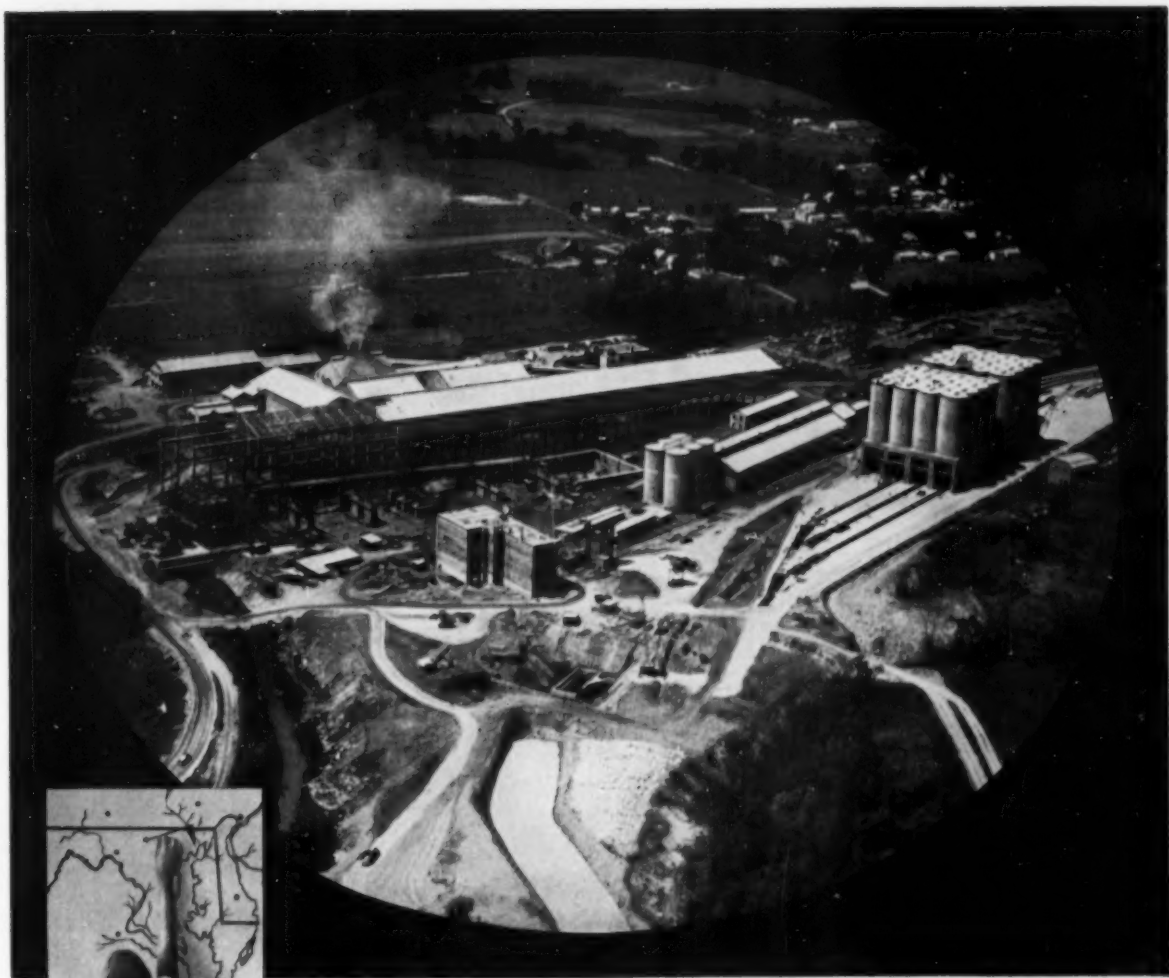
Standard & Poor's survey shows that management's direct labor cost—the ratio of wages and salaries to net sales or to gross national product—has stayed about the same in recent years, despite the steep climb in wages (charts above). The higher prices served only to keep the ratio steady.

The survey showed:

• Wages and salaries accounted for 55.1% of the gross national product in 1945, dropped to 51.4% in 1950, reached 54.3% in 1953, and then declined gradually to 53.8% in 1955.

• Wages and salaries accounted for 26.7¢ of industry's net sales dollar in 1945, dropped to a postwar low of 23¢ in 1950, increased gradually to 25.7¢ in 1954, and were fractionally less, 25.4¢ of the net sales dollar, in 1955.

In both instances, according to Standard & Poor's analysts, the ratio "for all practical purposes has been quite constant." They note, however, that pronounced changes were evident in some industries. Auto, chemical, coal,



GROWTH . . . *that contributes to growth!*

As America's phenomenal growth continues, the demand for new construction becomes even greater. New families need new homes. Expanding industries require more factories. Whole new communities must have new schools, churches, hospitals, stores. Networks of new highways must be built.

Huge quantities of cement—a material that is playing an increasingly important role in all construction—will be needed to make this growth possible. To meet this challenge, the entire cement industry continues to grow.

The Lehigh Portland Cement Company, for

example, has spent \$107,000,000 on expansion since World War II and is currently spending \$100,000 per day to further increase the supply of Lehigh Cements.

One of the projects in Lehigh's 1956 construction program is the expansion of its Union Bridge, Maryland, plant shown above. When the new facilities come into production early in 1957, they will more than triple the present annual capacity of the plant . . . making it one of the largest and most modern in the east.

This is growth for the future . . . *growth that contributes to growth.*

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agricultural machinery, metal fabricating, nonferrous metals, and textile industries were able to cut their 1955 labor cost ratios, reflecting "sharper increases in sales than in payrolls."

On the other hand, the labor cost ratio rose in aircraft manufacturing, office equipment, and rail equipment industries, "either because of lower sales or a faster rise in payrolls than in sales."

• **Cumulation**—S&P's also notes (importantly, in view of the AFL-CIO position on raises in recent years) that labor is inclined to overlook "intentionally or otherwise" the cumulative nature of payments to workers. It points out that while direct labor costs of the auto industry were equal to only 24.2% of net sales in 1955, the actual cost of labor entering into the price of a finished automobile was "substantially greater, because of the wage element involved in the costs of manufactured material, parts, and transportation."

According to S&P's, the same thing is true of direct labor costs in other, industries, in 1955:

Aircraft Mfg	40.4%
Automobiles and Trucks	24.2%
Auto Parts	36.3%
Chemicals	25.5%
Coal	34.2%
Electrical Products	35.4%
Food Products	18.2%
Machinery-Agricultural	32.7%
Machinery-Industrial	37.7%
Meats and Dairy Products	15.5%
Metal Fabricating	23.4%
Metals-Nonferrous	34.8%
Oil	15.1%
Paper	25.0%
Rail Equipment	38.1%
Retail Trade	14.1%
Shoes	33.1%
Steel and Iron	33.5%
Textiles	30.4%
Tires and Rubber	29.7%

Meanwhile, AFL-CIO's Labor's Economic Review contends that price increases "administered by corporate giants" in recent years failed to take into proper account (1) increases in productivity and (2) the small share of the sales dollar that goes for labor.

• **Sharing the Fruits**—Federation economists assume a 5% annual increase in productivity for industry as a whole. They contend that if this should lead to a balancing 5% increase in pay—the minimum demand of labor—up to four-fifths of the "fruits of increased productivity would still be left in management's accounts," because, says AFL-CIO, direct labor costs in most industries range between 20% and 33% of the net sales price of the manufactured goods.

Management spokesmen who have studied the AFL-CIO arguments say they are "tricky," and, among other things, fail to take into account the cumulative impact of wage increases and technological developments made at vast capital expenditures. **END**



IN ACTUAL ROAD TESTS, car muffler "A" ... made of ordinary steel ... looked like this after 1½ years of use. Hot corrosive gases and moisture have eaten holes through the outer shell.



MUFFLER "B" ... made of Armco ALUMINIZED STEEL ... is still in service after 4½ years. The shell is unbroken. Heat and corrosion have not destroyed protective aluminum coating.

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These special steel mufflers now come as original equipment on some of America's finest cars. And more and more fleet operators are finding they save when

they specify ALUMINIZED STEEL for replacement mufflers for their cars and trucks.

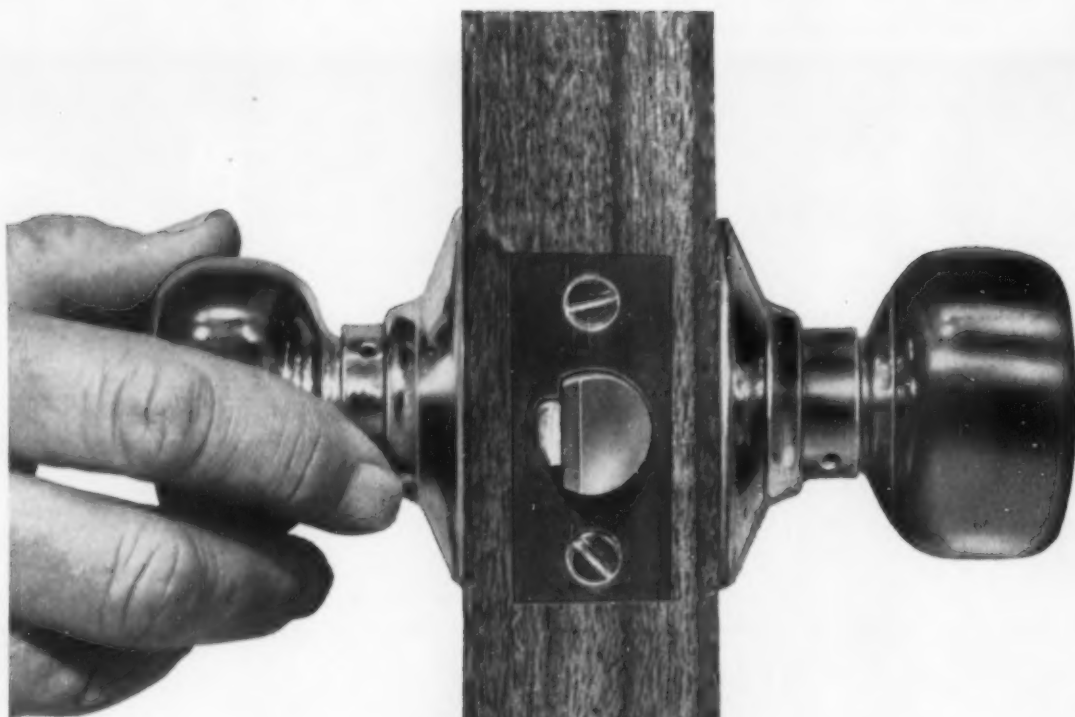
Armco ALUMINIZED STEEL (steel coated with aluminum by a patented hot-dip process) offers advantages for many products besides mufflers. If you make, buy or sell products where resistance to heat and corrosion is important, it will pay you to find out more about Armco ALUMINIZED STEEL. Call or write today.

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Washington, D. C., to San Francisco	\$2.50

These are the daytime Station-to-Station rates for the first three minutes. They do not include the 10% federal excise tax.

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In Labor

• • •

Long-Term Contracts Free Unions To Put More Punch in Organizing

Today's trend toward long-term contracts has freed unions for intensified organizing work in many industries. Three major labor conventions this month laid plans for major national membership campaigns.

The International Assn. of Machinists voted in San Francisco to go all-out for new members among an estimated 2-million unorganized workers in its jurisdiction. It set its sights particularly on those in the oil and petroleum industries—"continually expanding and offering a great union potential"—and those working in auto and truck repairs and maintenance. IAM now claims 900,000 members; its immediate goal is to top the million mark, but its ambitions do not stop there.

The International Union of Electrical Workers, meeting in St. Louis, decided to throw money and manpower into a stepped-up drive aimed at the South and at "run-away" shops. IUE now claims to represent 410,000 workers.

The United Steelworkers voted in Los Angeles last week to undertake large-scale organizing drives among clerical and technical employees in steel, aluminum, and related industries. These white-collarites are now only about 10% organized. USW now claims upward of 1.25-million members in 2,750 locals.

IUE's Pres. James B. Carey told his convention that organizing problems haven't been eased any by AFL-CIO merger. In addition to the "power of employers," Carey said, IUE is now facing "competitive unions with resources many, many times that possessed by your union." He warned that under present AFL-CIO rules, "if another AFL-CIO union gets to [unorganized] workers first, we are likely to be foreclosed forever from organizing them."

• • •

... And Aim for Next Target— Shorter Work Week at Same Pay

What are unions planning—and talking about—as long-range contract goals? The recent labor conventions showed a close parallel in the programs of key unions in three industries.

In each, a shortened work week looms as the union's next big objective. The International Assn. of Machinists talked in San Francisco of a campaign for a 30-hour week, with no cut in take-home pay; the United Steelworkers (which has no major bargaining scheduled before mid-1959) set a reduced work week as its next goal; and the International Union of Electrical Workers also beat convention drums for a cut in weekly hours.

IUE's Pres. James B. Carey told delegates that the union considers a shorter work week demand possible under reopening clauses in its long-term contracts. Carey also said that the union will not necessarily insist on a

flat 35-hour or 30-hour work week, but will consider alternate plans. He mentioned additional paid holidays that would be scheduled so as to give workers more long weekends and cut annual hours of work.

While the other unions talk of shortening the work week—thus feeling out management—the big drive is expected from the United Auto Workers in the auto industry in 1958.

IAM, IUE, and USW long-range plans also call for the extension of guaranteed annual wage programs, broadened and increased social welfare programs, and, of course, continued increases in wages.

David J. McDonald, president of the steel union, summed up his union's plans as a continuing effort to "share the wealth of American industry."

• • •

Settlement for One Meat Packer Leads to Hope for Another

Armour & Co. and two unions, the United Packinghouse Workers and the Amalgamated Meat Cutters, signed a new three-year contract early this week. Hopes soared as the struck Swift & Co. and the unions resumed negotiations.

The Armour agreement covers 35,000 employees in 37 plants. It provides for wage increases ranging from 10¢ to 22½¢ an hour now, additional 7½¢ raises in 1957 and 1958. Twice-annual pay adjustments will be made if the cost of living rises, on the basis of a penny for every half-point change in the C-of-I index.

The settlement includes a modified union-shop clause, one of the points of controversy at Swift. The "progressive elimination" of a 3½¢ wage differential in women's wages; severance pay for workers displaced by automated work, and pension and insurance improvements.

• • •

Meany Action, NLRB Order Set Stage for New York Waterfront Clash

Tension increased on the waterfront of the Port of New York this week. Two developments made another clash between the International Longshoremen's Assn. and the rival International Brotherhood of Longshoremen (AFL-CIO) inevitable.

First, AFL-CIO Pres. George Meany turned down an ILA appeal for reaffiliation—holding, in effect, that ILA still hasn't rectified the conditions (alleged gangsterism and corruption) for which the union was expelled from AFL in 1953. IBL and most other unions in the federation opposed ILA reentry.

Then, this week, the National Labor Relations Board ordered a new ILA-IBL representation poll within 30 days for Port of New York longshoremen. ILA had opposed limiting the vote to the New York area, hoping to use strength in other Atlantic and Gulf ports to crush IBL. ILA won on other points, however. For one thing, the voter eligibility rules set by NLRB are considered favorable to it in its battle to hold control of the Port of New York.

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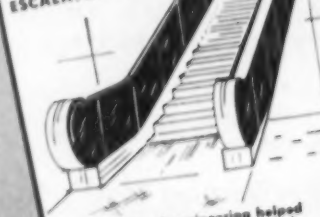
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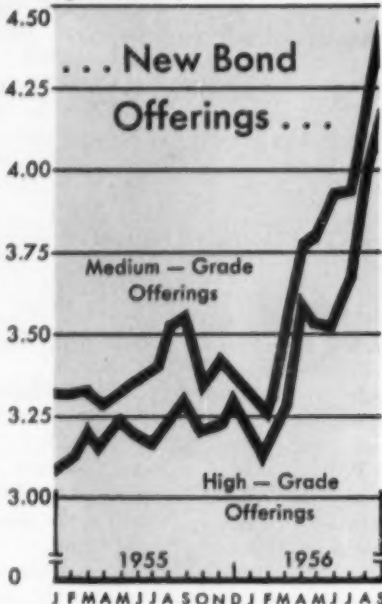
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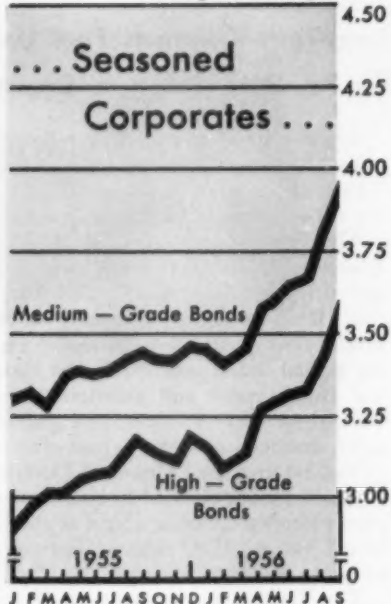
THE MARKETS

How "Tight Money" Has Hiked the Yields of ...

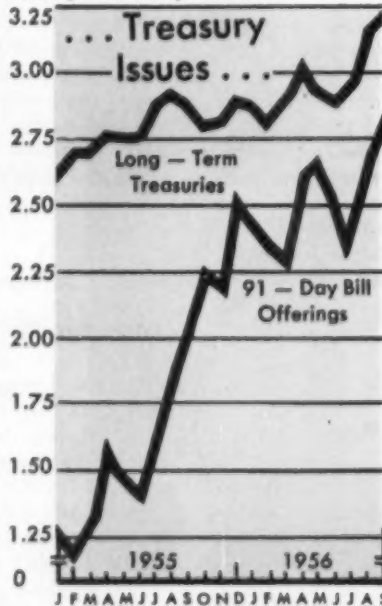
Average Yield (in percent)



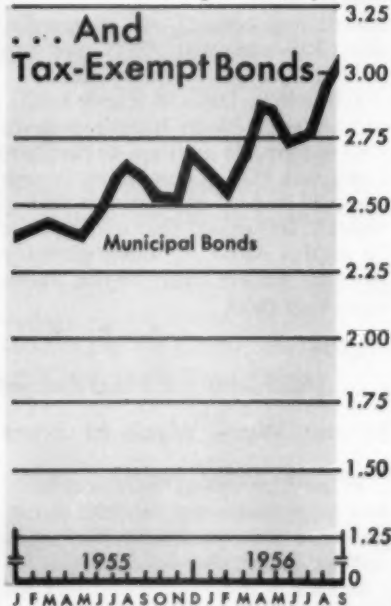
Average Yield (in percent)



Average Yield (in percent)



Average Yield (in percent)



Data: Moody's Investor Service, Standard & Poor's Corp.

BUSINESS WEEK Estimates.

Gaining a New Spark

For the first time in months, Wall Street's bond markets simultaneously unveiled some price buoyancy last week. Bids for U.S. government bonds staged impressive individual rises on several successive days. Price trends

in the corporate and municipal bond trading marts became firmer. And new issue offerings—both taxable corporate and tax-exempt municipal underwritings—got encouraging receptions. • No Celebration—But Streeters still

Shreveport's ultra-modern Beck Building boasts colored aluminum walls, music in the elevators—and an ingenious air conditioning system that...

cools on the sunny side, heats on the shadow side

"We built the Henry C. Beck Building with the thought of providing custom-made office space for tenants," relates Building Manager Edward E. McClung. "Our luxurious wood-paneled offices, mosaic-tiled lobby, music-filled elevators, and our flexible air conditioning system are examples.

"Since the exterior walls expose nearly an acre of glass to the hot sun, temperatures rise as much as 20° around the perimeter of the building. To compensate for this difference, and satisfy all the tenants, our architects and engineers devised a dual air conditioning setup: a peripheral system cools the sunny side of the building and heats the shadow side, when necessary; an interior system maintains comfortable air conditions in inside offices.

"Selected on the basis of durability, design, and past performance, American Blower air handling and conditioning equipment is a major factor in our dual system," concludes Manager McClung. "American Blower offices in Dallas and New Orleans helped us coordinate delivery between our Texas and Louisiana contractors."

If your plans include air conditioning—for a large-scale central or zone system, or a system for a smaller store, showroom or factory—call our nearest branch office for friendly assistance. American Blower Corporation, Detroit 32, Michigan. In Canada, look for Canadian Sirocco products.



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have staged no gala block party to celebrate this auspicious occasion. They're happy enough, but making no prediction that the long upward trek of money rates (charts, page 172) has just about ended.

For their caution, they have some apparently cogent reasons.

I. Money and Rumors

For one thing, money's demand-supply position (which many consider even more responsible for today's high money-rentals than the Federal Reserve's "credit restraint" program) is still exceedingly tight. This week, the Treasury was forced to dispose of its usual 91-day bill offering on a 2.985% cost basis. The latest rate is the highest since the "1933 bank holiday" when Treasury was assessed a 4.259% borrowing cost on one 91-day bill issue.

- **"Buncombe"**—Part of last week's price advance appears to have been the product of potent rumors—described by one of the money market's leaders as "unadulterated buncombe."

- First came widely circulated reports that Treasury officials, on behalf of federal trust funds and agencies, had started heavy buying in government issues. This rumor seems to have generated much of the strength in the Treasury market's initial rally.

- Next, later in the week when the government bond market appeared set to return to a state of persistent decline, the same rumor spread vigorously.

- And, in between, another yarn was making the rounds. This one: that the Fed was set to increase the nation's supply of investable funds by reducing reserve requirements of its New York and Chicago member banks. This story gained extra potency near the end of last week. On Thursday, the White House announced it had taken specific steps to ease home-building credit—and, to some, this seemed a prelude to moderation of the Fed's credit restraint program.

- **Artificial Factors**—Some Streeters who watched carefully saw that despite all the excitement these rumors generated in the government bond market, the price gains that followed weren't produced by a sudden rush of "real" buyers. Most of the gains reportedly stemmed from such "artificial" factors as: the optimistic writeups of dealer bids for Treasuries; professional short-covering operations, touched off by the "good news" rumors going the rounds; and the temporary absence of sellers.

II. Signs of Promise

However, it wouldn't be fair to overlook some other more promising facets of the current bond market.

- **No Fake**—Municipal bond dealers,

for instance, report that there has been nothing "fakey" about renewed interest in their wares. An increasing amount of money normally used in the stock market has been flowing into their market, they claim. And this is due to (1) the attractive yields that tax-exempts now offer and (2) the sloppy price performance of common stocks generally (page 110). Many traditional buyers of municipals, who some time back decided to move to the sidelines, are becoming interested in those issues again, say the dealers.

- **Few "Sours"**—There's also evidence of similarly renewed interest in corporate bonds: Some recent offerings have reached sharp premium levels immediately after their issue; and there has been a swift drop lately in the number of "sour deals."

III. Sense of Caution

All those factors appear to be pointers toward happier days in the bond market. But the dealers are still cautioning against too much heady optimism.

Lenders, they say, are still in the saddle and if a borrower wants to set up an attractive new long-term debt offering he must be willing to make plenty of concessions. And these concessions aren't restricted to offers of attractive rates, either. In an increasing number of cases these days borrowers have had to guarantee that today's high yielding new bond issues won't be refunded later on, when money gets easier, through the addition of such phrases as "non-callable for 10 years" to the indentures.

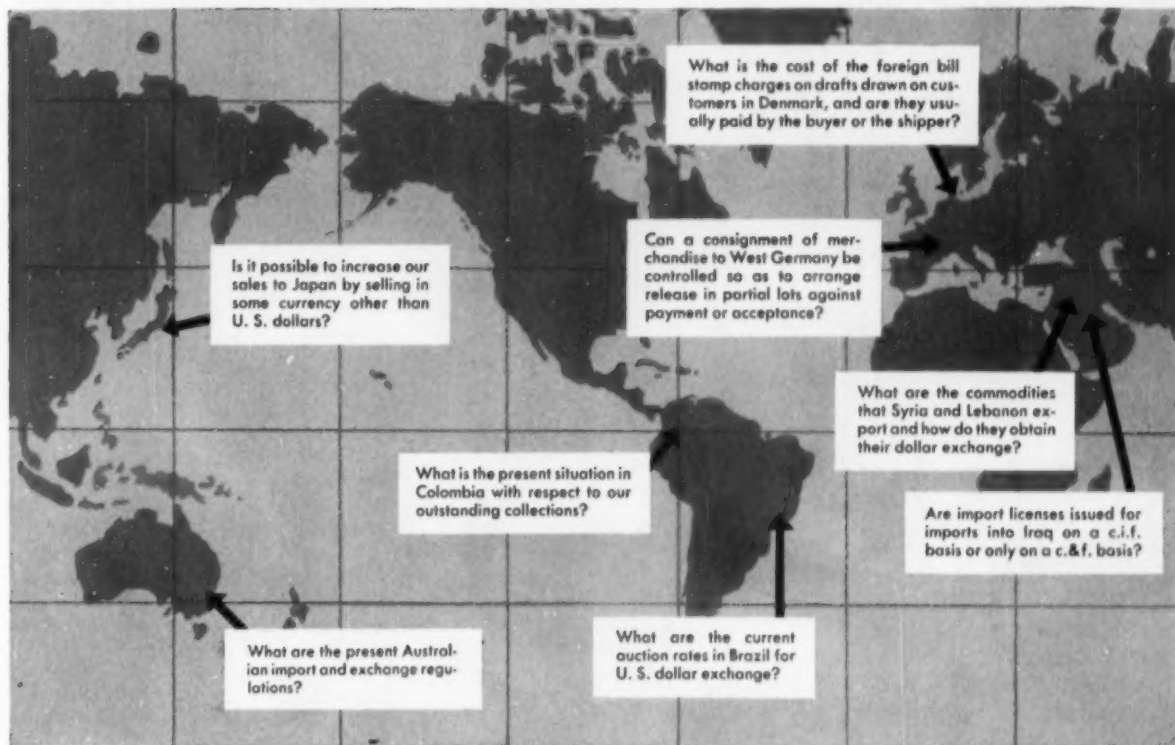
- **Warning**—Prominent investors who have returned to the bond market lately have warned dealers frankly that although the market looks attractive right now, it will quickly lose its appeal if yields drop appreciably. At the same time, a further sharp rise in bond prices will probably attract a swarm of new offerings that by their very weight could very quickly sap the market's strength.

IV. "Pros'" Opinion

Best reflection of the "pros'" opinion on the near-term outlook comes from Moody's Investors Service. It says, "Nothing that has happened lately suggests that an important rally . . . is about to develop. The monetary authorities are maintaining their restrictive stand in the presence of actual and potential demands for funds, which include a heavy overhang of planned but as yet unscheduled corporate issues. This is coming at a time when the federal government needs funds, and when consumer credit should expand more rapidly later in the fall." **END**

FOREIGN TRADE

Bank's Foreign Department helps customers solve financial problems the world over



Guaranty Provides the Facts

American businessmen engaged in foreign trade face a maze of problems which make many domestic operations appear simple by comparison.

In many countries exchange and import restrictions have become tighter and more complicated. Currency regulations change. Business conditions change. Internal government regulations change.

The exporter needs professional financial help to do business profitably. Many of them rely on the Foreign Department of Guaranty Trust Company. Guaranty's foreign

collection staff, for example, is up to date on exchange and import restrictions, gives close attention to all the details involved in fast collection of funds.

Foreign Department officers of Guaranty Trust Company keep in close touch with financial conditions in all countries, through the bank's 2,000 carefully selected foreign bank correspondents, through Guaranty's branches in London, Paris, and

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Wall St. Talks...

... about things bullish and bearish ... oil companies' Middle East earnings ... a Pan Am rumor.

One interesting market observation: "The recent buoyancy of commodity and labor prices should be construed as bearish—not bullish, as so widely interpreted. It is no accident that the "celebrated bull markets ... of the late 1920s and ... middle 1950s coincided with two periods of the most stable commodity prices in our history. Relatively low ... and stable commodity prices are bullish and volatile ... and a high level of commodity prices are bearish."

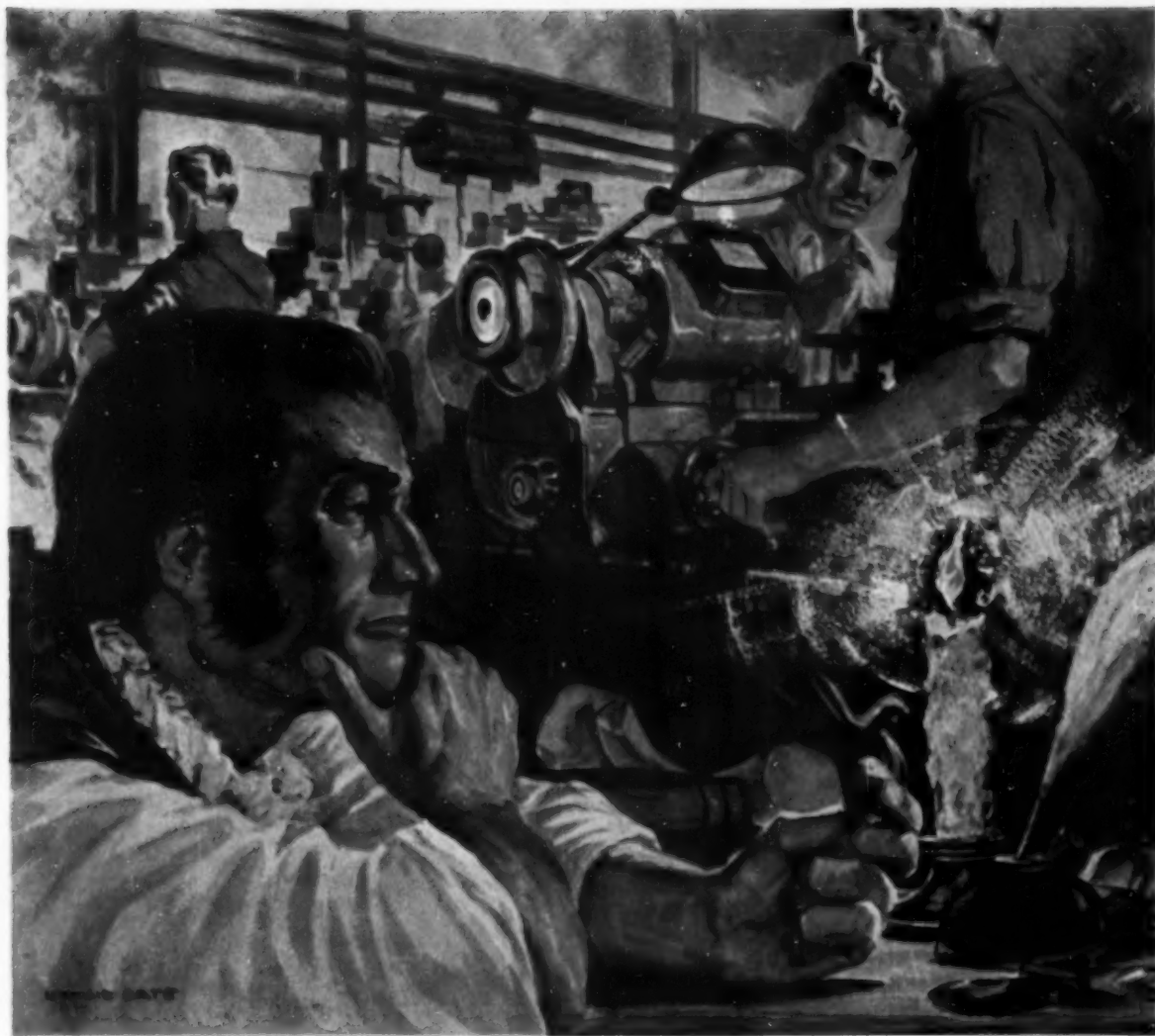
Reopening of accelerated amortization covering new steel plants, some smart Streeters are betting, won't come this year. Among top Washington officials, they hear, there's too wide a difference of opinion as to its advisability at this time.

How really important are earnings from Eastern Hemisphere operations to the big international oil companies? Standard & Poor's Corp. figures that this year Gulf Oil will earn 52% of its estimated \$10.50 per-share earnings from Western Hemisphere operations; Socony Mobil will similarly earn 58% of its projected \$5.75 net; Standard Oil (Cal.), 61% of its estimated \$4 net; Standard Oil (N. J.), 75% of its estimated \$4.10 net; and Texas Co., 69% of its \$5.25 estimated net.

Another rumor hits the dust: A recent yarn indicated that Robert R. Young, Alleghany Corp., and the Texas millionaire Clint W. Murchison (who helped Young get control of New York Central in 1954) had jointly acquired a big stock interest in Pan American World Airways. This week Young-Alleghany spokesman denied it.

The Louis E. Wolfson-controlled Merritt-Chapman & Scott Corp. may soon sell still another of the companies it bought when Wolfson was intent on building up an industrial empire. Negotiations are now under way toward the disposal of its Marion Power Shovel-Osgood Co. division.

The avid desire for "diversification" has spread into the stock brokerage business. John M. Loeb, head of Carl M. Loeb, Rhoades & Co., has just purchased part-ownership of the "Lassie" TV show.



Eli Whitney knew the secret...

IN 1798, ELI WHITNEY—inventor of the cotton gin—conceived an unheard-of-method for manufacturing interchangeable rifle parts. His idea led to modern assembly-line techniques which have made America the most productive nation in history.

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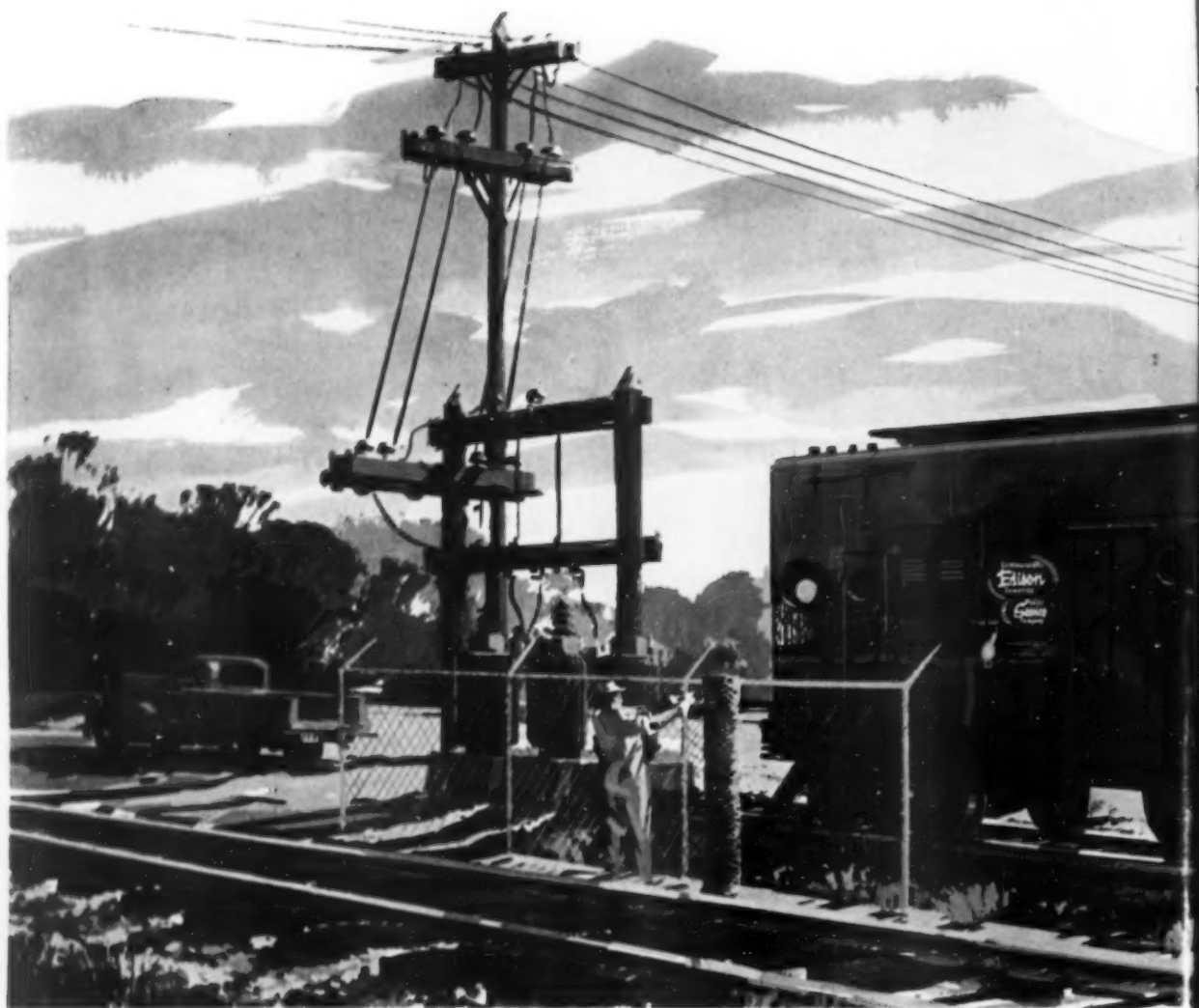
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PERSONAL BUSINESS

BUSINESS WEEK

SEPT. 29, 1956

A BUSINESS WEEK

SERVICE

Campaign time produces a spate of political fervor among businessmen who want to do more for the party of their choice than just register and vote—but frequently they're apprehensive over what might be asked of them, in time and money.

Even now, with little more than a month to go before Election Day, you may be hesitating about participating more actively because you don't know the answers to such questions.

If you check around your neighborhood you'll likely find several different groups working on behalf of the candidate you like.

One of them will probably be called "Volunteers for Jones," "Independents for Jones," "Businessmen for Jones," or whatever. Such amateur groups are temporary, generally disband as soon as the campaign is over.

If you want something more permanent, offering more in the way of participation, your best bet is to join the regular party organization.

There are two ways of joining—and neither will involve you in heavy expenditure of time and money, unless you wish it.

First, there's the local county or political club. It's a loose-jointed organization that perhaps covers a dozen or more precincts. You're eligible to join if you're a registered voter for the particular party, and you're in when you pay the nominal membership fee—generally between \$2 and \$5 a year.

One of the club's functions is fund-raising. If it puts on a barbecue or a \$10-a-plate dinner, you'll be asked to contribute. But if you're registered with the party and not a member of the club, you'll probably be solicited anyway. The club may never make much more call than that on your time. But if you're really looking for work, you can volunteer your services.

If you do, you'll likely be directed to your party's precinct captain, and at the precinct you'll get into politics at the basic level. (You can, in fact, get in at this level without joining the county club; just go see your precinct captain, and volunteer.)

The precinct captain needs block captains who supervise canvassing for registration and donations in the neighborhood. And the block captains often need telephone canvassers to help them.

You may be called on to lend or operate a movie projector at block or precinct meetings, help man a booth at the county fair, borrow and haul chairs to meeting halls, locate people in your neighborhood who'll vote for your party if they're reminded and if you provide them with transportation.

You may be asked to hold a rally at your house at which a candidate can meet your neighbors and discuss campaign issues.

If you have talent at writing or public relations your best contribution might be writing speeches, helping do research for a local candidate.

Your businessman's talent for organization may mark you as a natural block captain. From there, you could move up to precinct captain.

This job could take up a good deal of your time; but in such a spot you would begin developing political power and influence, for precinct captains,

PERSONAL BUSINESS (Continued)

BUSINESS WEEK
SEPT. 29, 1956

working with county chairmen, recommend candidates for office or persons to staff organization jobs.

Once you're involved as deeply as that, you'll find out that there really is meaning to words like "machine" and "steamroller;" that a party worker has a job on his hands if he doesn't want to be a "yes man" for the political boss.

If you're trying to find something unique to give your youngster or favorite grandchild as a birthday or Christmas present, a Shetland pony might be just the answer. Shetlands make excellent pets; they have nice dispositions, and plenty of stamina. They can be ridden eight or 10 hours a day, rarely get sick, and have a lifespan of 25 years or more.

They are inexpensive to keep—it costs no more to care for them than to care for a dog or cat. Their food bill comes to \$4-\$5 a month, and if you have an acre or so of pasture, a pony's food will cost you nothing while the grass is growing.

Another advantage is that you don't need a lot of space to keep one. A garage can be a suitable stall. And in the milder-climate areas, ponies can be turned loose on a lot most of the year round, and require no more shelter than a lean-to shed.

Prices of unregistered ponies generally start around \$100, average between \$150 and \$200. Of course, if you want a registered Shetland, the price tag is much higher. Many breeders recommend purchase of a gelding, about 42 in. high.

You can buy a pony from several of the major mail order houses as well as from several hundred dealers in most parts of the U.S. You can find a list of dealers in copies of the American Shetland Pony Journal, Box 280, Aledo, Ill. One precaution: Be sure to check local ordinances to be sure they permit keeping a pony in residential areas.

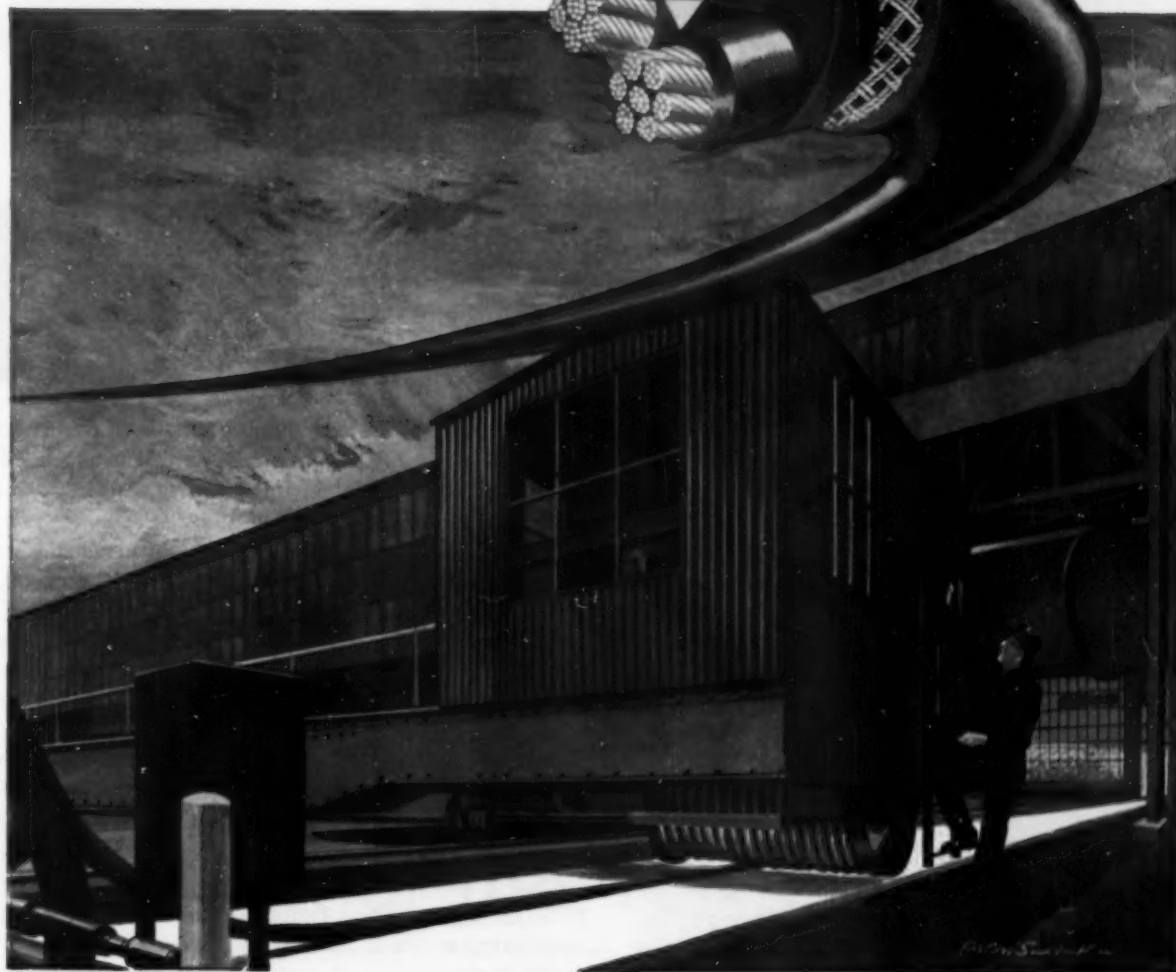
Note for gardeners: With the fall winds coming on and late-blooming flowers beginning to droop, this is no time to give your green thumb a rest. Now, you should be planning for spring and summer, and in most parts of the country, there are only a few weeks left to get ready. One excellent project would be rebuilding your lawn. Another would be to plant early flowering spring bulbs, such as grape hyacinth, narcissus, and snowdrops. Getting them in now instead of next spring gives them a chance to get settled in the ground before frost and be all ready to go at the first spring thaw.

If you have a yen to be a conchologist (shell collector) and make it a hobby to pick up interesting shells at the beach, or in the water, or even on top of mountains, there's a new booklet out that you will find helpful. It's Let's Collect Shells, which in very simple language provides handy information about what shells to collect, where to collect them, and what equipment is needed. Copies of the booklet can be obtained free from Shell Oil Co., 50 West 50th Street, N. Y. 20, N. Y.

Here's a tax tip you might pass along to a working girl you might know who has to earn a living for herself and also support a dependent relative who is mentally or physically incapacitated. If she needs a practical nurse to help take care of her relative, so that she can hold a job, she is entitled to deduct such expenses up to a \$600 maximum.



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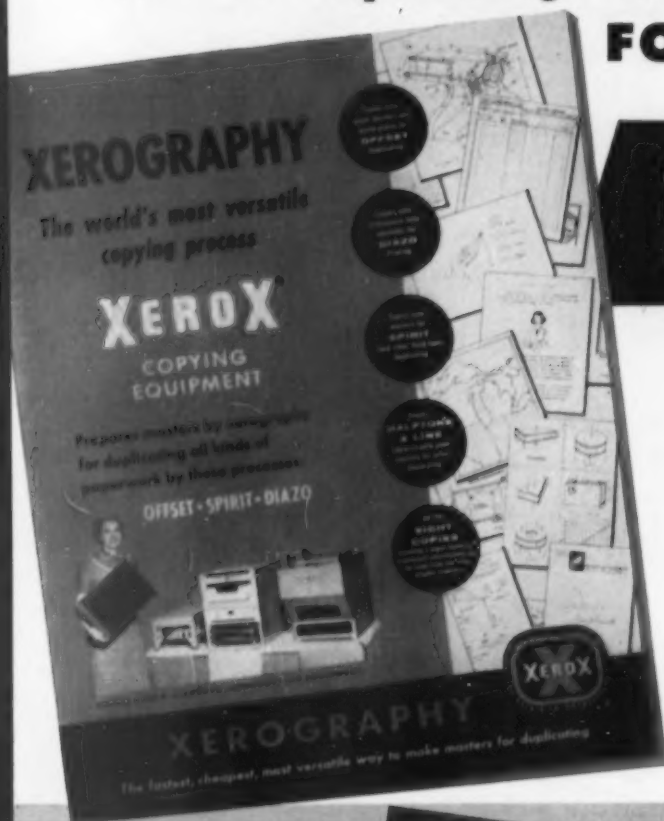


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Frederick R. Kappel (cover and right) is new president of AT&T. That makes him . . .

Top Man of the Top Company

When Frederick R. Kappel (cover and above) was suddenly precipitated into the top spot at American Telephone & Telegraph Co. last week, he inherited what may be the biggest corporate problem anywhere—to pay for \$10-billion worth of expansion in the next four or five years.

The problem already existed—and Kappel was not brought in specifically to solve it. His promotion to the presidency of the world's biggest corporation (almost \$15-billion in assets, 745,000 employees, more than 1.4-million stockholders) came without warning as Cleo F. Craig, president since 1951, stepped up to chairman.

• **From Western Electric**—Kappel is a career man at Mother Bell, as its top executives always are. He moved to the top of the parent company after 2½ years as president of Western Electric Co., which by itself easily qualifies as one of the dozen largest manufacturing enterprises in the U.S.

He has been with the Bell System since 1924, literally starting from the ground up—as a groundman in line-stringing operations with Northwestern Bell Co. in his native Minnesota. But when the directors made last week's terse announcement, newsmen—and the company's own public relations department—were left scrambling to get information on the new chief.

Kappel himself learned of it only a few minutes before the news was released. He began working at the job of chief executive officer the minute the announcement was made. His own successor at Western Electric wasn't decided on and announced until this week, and the moving-up among ranking personnel is still going on.

• **Breaking In**—Craig, who in July filled out five years in the top slot, is 63 years old, and he would have been due for retirement under the company's policy in two years anyway. The move at this time, say company men, is designed to

allow the new man a period in which to benefit from the experience and guidance of his predecessor.

Quick changes at the top have happened before. Leroy A. Wilson, president before Craig, moved up just as unexpectedly. That was when Walter S. Gifford, who had headed the phone system for 25 years, stepped aside, also at 63, to become chairman. The story goes that Wilson learned of it when Gifford ambled into his office one morning, casually said, "Come on upstairs—the board wants to tell you you've been elected president."

Craig moved in almost as fast, when Wilson, who had become president in 1948, died in 1951.

Kappel himself has gotten used to quick moves. "Every time I think I'm beginning to get my own life organized," he says somewhat ruefully, "wham, the lightning strikes. Now that's happened again."

• **No Crown Prince**—Exactly why Kap-



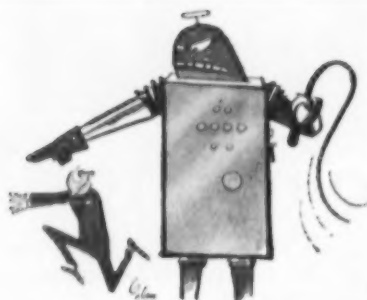
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pel was picked, the board isn't saying. AT&T has never operated with clear lines of succession. Any one of a half-dozen men, including operating company heads and high brass of the parent corporation, were figured as having both the qualifications and the experience for the job.

With Craig's retirement expected within a year under any conditions, there had been considerable speculation—and some betting—within the company on his successor. Although Kappel was included on most lists of contenders, even with hindsight many officials admit they hadn't figured him too strongly as No. 1.

But one of Craig's main jobs for the past year has been to groom several possibilities for the post—and Kappel is reported to have been Craig's personal choice.

• **Name on a Door**—Craig will maintain an office at 195 Broadway, the company's headquarters in New York City—but associates say he plans a lot of golfing and fishing for a while. With AT&T, the chairman has no official function aside from presiding at board meetings—and Craig will vacate even that duty when he retires finally at 65.

Both Craig and Gifford operated without chairmen. Since Kappel, who's 54 now, has a good 10 years before his own retirement, presumably he'll operate that way too for most of his hitch.

So Craig will still be around for two years of advice and consultation, but the problems are now Kappel's. And he's got some king-sized programs to work on.

• **Fast Growth**—Just since 1950, phones in service have zoomed from a little over 35-million to close to 43-million currently. New ones are going in at a rate of 3-million a year, and the demand for more and better service on existing lines is spiraling upward.

To meet this demand—for phones, stations, interconnections, new dialing systems—as well as to anticipate future demand, the Bell System this year is spending about \$2.1-billion. It breaks down this way:

- \$225-million for new buildings and additions.
- \$600-million for central office equipment to serve new customers and to shift to dial service.
- \$850-million to connect new customers to central offices, provide for higher volume of communication, including installation of cables, coaxial cables, microwave carriers.

• \$425-million for new telephone sets, dial switchboards, special products. A similar amount is budgeted for 1957. Barring a serious collapse in the general economy, phone men see this rate of spending continuing for much of the next decade.

• **Financing**—Merely managing to put

that much material in place, while keeping ahead on technological developments, is a gargantuan task. Complicating it is the job that must be done first—raising the money to pay for it.

For its \$12-billion expansion in the past years, the Bell System has already swallowed \$8.6-billion of new money (BW-Aug. 4 '56, p84), on top of its retained earnings and depreciation. In the last year alone, the company has borrowed a huge \$884-million and is issuing \$575-million of new stock.

Between public regulation of rates and its own inviolate policy of a \$9 dividend, AT&T probably won't get from earnings and depreciation even one-third of the \$10-billion more it'll need over the next four to five years. Somewhere between \$6-billion and \$8-billion will have to be found outside. And over the next decade, money is expected to be considerably tighter than during the last one.

• **Money Wizard?**—Despite these needs, outsiders quickly noted that Kappel, as opposed to his three predecessors, is not a "finance" man. Gifford was known to Wall Street as a "financial genius"; both Wilson and Craig, before becoming president, had served in official financial posts with the company. Kappel never has—yet his may be the toughest money-raising job of all.

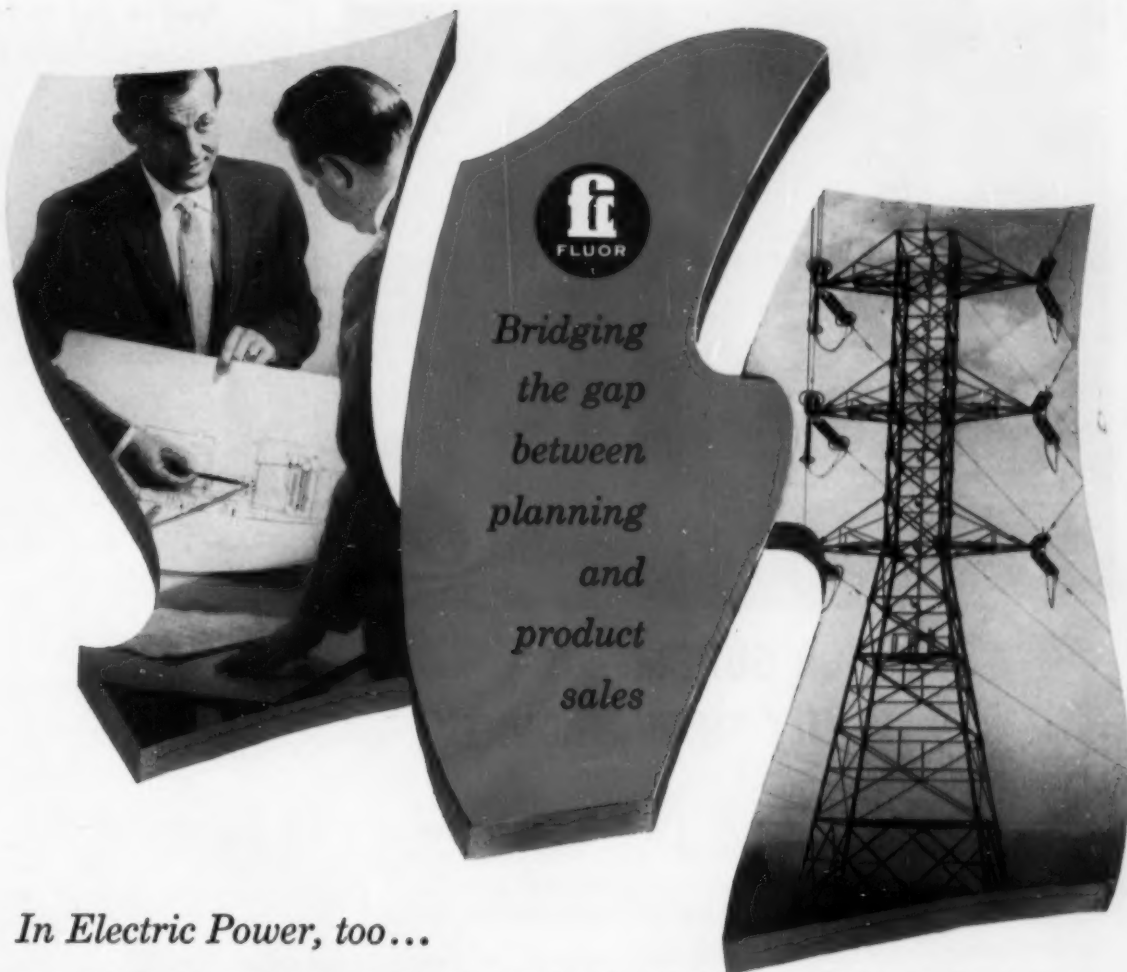
Except for his period at Western Electric, Kappel's career has been almost entirely in "operations"—actually supplying telephone and allied services.

Starting in 1924, he moved up through engineering ranks, was for seven years operations vice-president of Northwestern Bell, had a short period of running the long lines, and for four years was vice-president (operations and engineering) for the parent company. That's the top "operating" job in the system. After that he moved over to Western Electric.

Expansion and money-raising are usually talked about on a consolidated basis for the system, but as a practical matter many of the operating companies plan and execute their own programs directly. When his "financial inexperience" is mentioned, Kappel retorts dryly: "In this business, you don't spend the money without having had the responsibility for getting it."

• **Course Plotted**—Actually, the planned expansion and the necessary financing for the next two years at least are fairly well mapped out. For instance, the new \$40-million transatlantic cable that's going into service this week will be inadequate in two years, and a second is already being planned.

Then, too, in any company as vast and complicated as the Bell System, swift policy changes are not only unlikely but almost impossible. AT&T's an umbrella for 20 highly decentralized and autonomous operating companies—

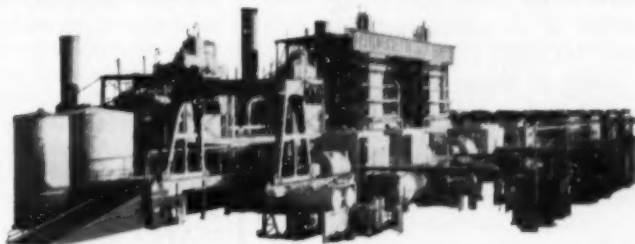


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"... 'you've got to be able to do things before they're needed' ..."

STORY starts on p. 185

17 regional phone companies, Western Electric, the research side of Bell Laboratories, a real estate company—plus four unconsolidated phone companies.

If Kappel has in mind any changes, he certainly isn't talking about them yet. Demand for service is still strong, and the expansion plan is already well enough organized at all levels to keep going for quite a while without tampering.

Adds Kappel: "The operating companies all have very responsible managements, and the job of running their companies is in their hands. One of the most constructive things you can do is stay out of their way."

• **Administrator**—To a large degree, that has always been Kappel's philosophy. He has a reputation as a top-flight administrator. At Western Electric, for instance, he hardly considered himself a "manufacturing" man when he went in. Neither did his subordinates—and since most heads of WE had come up through manufacturing ranks, it took almost three months before suspicion of him dissipated completely. During his stretch there, he spent only about half the time at his desk, the rest in the field, checking with every plant and in installation of the company, including the Distant Early Warning line of radar stations that WE is building in the Arctic for the government.

Western Electric, like its parent AT&T, hardly has a selling problem. Some two-thirds of all its business goes to the Bell System, and most of the balance goes to the government. It has been largely a case of meeting the needs of those customers.

• **Achievement**—Kappel still doesn't consider himself a "manufacturing" or a "sales" man. But even considering the seller's market, he is proud of his record at Western Electric. He points out that during his 24 year tenure annual sales increased by a solid 50%—from \$14-billion to \$24-billion. The challenge, he feels, is to provide the leadership "to let that happen" rather than to take a position of "making it happen."

"In this business," he adds, "you've got to be ready to do things before they're needed."

AT&T is too big to bear one man's imprint. Few things develop there that haven't been filtered through such a large group that pinpointing responsibility is almost impossible. Kappel disclaims credit for any single development. But he, as much as anyone else,



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- full complement of rollers
- unequalled radial load capacity
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- compactness and light weight
- runs directly on hardened shafts
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...you'll find Thermoid Rubber and Friction Products used everywhere

AROUND YOUR HOUSE



Thermoid V-Belts and Friction Discs perform vital services in automatic washers and dryers; in home power equipment.

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ON YOUR FEET



Rubber Heels and Soles for millions of shoes are produced by the large, versatile Thermoid organization.

...ON YOUR FLOORS



Carpeting by Thermoid keeps footsteps quieter... improves appearance in automobiles, homes and offices.

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...and throughout business and industry—you'll find Thermoid Hose, Conveyor Belting, V-Belts, Brake Linings, Clutch Facings and other products of rubber and asbestos—delivering even more than is expected of them. Quality materials and versatile engineering, plus multi-plant facilities and personalized service—all are yours when you specify Thermoid.



Thermoid Company • Trenton, New Jersey

"... he never promises anything until he's sure he can deliver..."

STORY starts on p. 185

was responsible for the system's highly successful push on colored phones. He was strongly involved with the first transcontinental coaxial cable, the first cross-country microwave setup (for transmission, among other things, of television programs), and he was on the first 200-mi. voyage of the ship that laid the first transatlantic phone cable.

• **Personality**—Kappel stands a shade under six feet, but his solid 203 pounds make him look bigger. He's soft-spoken, deliberate and careful in replies, almost never gives a snap answer. He's known as one of the calmest of men; associates say no one has ever seen him angry, ruffled, or embarrassed. He plays golf, but neither expertly nor often.

There are few spectacular marks to his career, no known "turning points." His reputation, even inside the company, has been built more on his total performance than on any special achievements. He's rated as an outstanding organizer, a man who never promises anything until he's sure he can deliver and who then has never failed to deliver. He's also known as a man who is adamant in his decisions, once he has made up his mind.

• **The Big Job**—His job now, as he sees it, is not only to expand the system to meet demand, but to find new and better ways to put the existing service to profitable use.

According to informed outsiders, the vast Bell System of nearly 200-million mi. of wire is now fully utilized for only about one-third of each day. Kappel isn't ready to suggest any special solution for this problem, but high utilization of plant becomes ever more pressing for a company whose money needs are pyramiding, whose rates and earnings are rigidly limited by public regulatory bodies, and whose possible expansion into neighboring fields is thwarted by last winter's antitrust consent decree (BW-Feb. 4 '56, p. 27).

• **Practical Man**—Kappel is rather unique, even on AT&T's top level, in never having been involved in any of the company's executive training and development programs. He was always a step ahead of a wave of training for each management level.

Kappel is a firm believer in good education—he's a graduate engineer of the University of Minnesota—but he pointedly notes that there are a lot of good men, in and out of AT&T, who have done well without much formal or special training. **END**

A building "Whodunit"



The Case of the 5th Column Mob

■ From the files of crime against industry comes this story of a gang that thought they had all the angles. The hulking hoods of the 5th Column Mob muscled in on building . . . called for 20% more columns in construction . . . padded labor costs . . . slowed up movement of materials, all in a plot calculated to extort a heavy payoff. Watchful architects cracked the racket wide open. They testified in behalf of the Ceco-Meyer Waffle method of reinforced concrete floor joist construction. They pointed out that here was a building method that cut the number of columns 20% . . . increased usable space . . . saved materials and labor. Result: More production area for management. Case closed. See a Ceco Engineer for help on *your* building problem.



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STEELFORMS/CONCRETE REINFORCING/WINDOWS, SCREENS, DOORS/METAL LATH/STEEL JOISTS/ROOFING PRODUCTS



Ownership switches among Hertz and Avis, auto rental giants, have created brief but wonderful chaos.

Just Who Is Working for Whom?

When a group of Boston investors purchased Avis Rent-A-Car System last week, they created a reverse twist situation in that city that would have done credit to a Hollywood script writer.

Outlets that bore the sign of the Avis System were sending reservations to Hertz stations (Avis' traditional rival) in other cities. Why? Because the sign notwithstanding, these outlets actually belonged to Hertz. And the opposite was also true. Apparently Hertz stations were really part of the Avis organization.

The situation has had even some of the employees confused.

• **Big Three**—To understand how this has come about, you have to do some poking into the background and operating procedures of car renting.

The industry contains at the moment three major organizations that account for an estimated 65% of the auto renting business. (BW—Feb. 25 '56, p. 66). The three major systems in order of size are Hertz, Avis, and National, which is an association of independents. Local operators do the rest.

Both Hertz and Avis are themselves divided in two. Each owns some stations outright and has licensing agreements with others. The licensees pay

initial fees and monthly advertising installments usually based on the number of cars in their fleets.

The advantage local operators gain from being in the Hertz and Avis systems, or from associating themselves with National, is that they can obtain business from outlets belonging to the same system in other cities. Most car renting is done by traveling businessmen who reserve a car in advance by going to the local Hertz, Avis, or National outlet. There they can order a car to be waiting at station or airport in another city when they arrive. National advertising plays an important part in selling this service.

• **The Soup Thickens**—The setup of the auto rental industry as a whole is complicated enough. But the interrelations of Hertz and Avis can make the head spin. The story goes something like this:

Prior to the fall of 1954 the largest licensee in the Hertz system was Richard S. Robie. He headed a number of New England corporations including R. S. Robie, Inc., and U-Dryvit Auto Rental Co., which had outlets mostly in the greater Boston area. These did an annual volume of approximately \$6.5-million by 1954.

• **Robie Buys Avis**—Then in Decem-

ber, 1954, Robie bought the Avis-Rent-A-Car System from Warren Avis, a Detroit Ford dealer who had specialized in putting rental stations in airports. With this purchase, Robie had his own stations in New England still doing business under the Hertz name and contributing to the Hertz advertising pool at the rate of \$8,000 a month. At the same time, he owned Hertz' chief competitor.

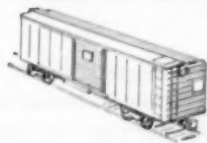
Robie didn't withdraw from the Hertz organization until April of the next year.

From April, 1955, on, Robie added his Boston stations to his recently acquired Avis system. In addition, under Robie's direction, Avis acquired more stations either by buying them outright or signing licensing agreements with independents. In a period of a year, Avis grew from 330 outlets to over 850.

• **New Ally**—During the year that Robie's Boston stations were part of the Avis system, Hertz was obliged to find other outlets in the city. It didn't have far to look. At the time Robie bought Avis, there already was an Avis licensee in Boston. And when Robie moved his outlets over, this licensee found that he was superfluous. His name was Frank Sawyer, owner of not



Box-car-size stresses are no problem for Tinnerman **SPEED GRIPS®**!



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Men, Medals

Take Two Men—Elmer J. "Tange" Tangerman and W. M. "Bill" Stocker, Jr.

Elmer Tangerman (left, above) has been Executive Editor of *American Machinist* for the past 6 years. He has been with the magazine, and with other McGraw-Hill publications, for 27 years. Time served as machinist apprentice, millwright, boilermaker—plus two Purdue degrees and a license as a Professional Engineer—serve him as background for his present assignment. He is considered an authority on high-speed machining, automation, and advanced tooling.

Bill Stocker, Associate Editor, has been with *American Machinist* for 7 years—and has devoted most of his effort to shop practice, manufacturing methods, and technical administration. On-the-spot Air Corps experience with bombings and fire raids in Europe, and covering such holocausts as industrial fires, windstorms,

and last year's New England floods, have impressed him with the immense importance of teaching industry to survive major disasters.

Take Two Awards

For his recent reports, "Tools Make America Great" and "Doorway to a Better Tomorrow," Tange was awarded the Freedom Foundation Medal on March 13th at ceremonies in New York City.

That same day, the Federal Civil Defense Administration announced the soon-to-be-made awards of certificates of commendation to Bill and to *American Machinist* for the February 1956 report "Disaster Control"—a revision and updating of an earlier 1950 report which is still a highly regarded text at the Staff College of the Federal Civil Defense Administration.

Latest in a long series of awards



and Machines

made to *American Machinist* and its staff, these recognitions serve to reaffirm the validity of the policy of the magazine.

Take machines and American Machinist

There's more here than meets the eye at first. Elmer Tangerman put his finger on it recently when he said "Our job is bigger than simply delivering information on technology and equipment. As a team, we all strive to cover every aspect of the executive's job of making technology work effectively. This includes people,

policies, morale, disaster control and a wide range of other subjects beyond the newest in techniques and equipment."

In experience . . . in knowledge of their jobs . . . in teamwork that best serves their readers, Bill and Tange are typical of McGraw-Hill editors. Specialists, fully at home in their fields, they live with the problems of the men who look to them for accurate reporting of news that is vital to their industry. That is why every McGraw-Hill publication provides the best possible audience for your advertising.

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KOPPERS
CHEMICAL ENGINEERING
SERVICES

"... it is a sort of complicated deal ..."

STORY starts on p. 192

only a car rental agency but Checker Taxi Co. of Boston. So Hertz and Sawyer joined forces to compete with Avis and Robie in Boston.

Then, in May 1956, the apple cart was again upset. Robie unexpectedly sold his Boston stations to Hertz and retired from the active management of Avis, even though he still owned it (BW-May 19 '56, p. 36). This completely reversed the situation of the year before.

• **Who Gets What?**—Since May the 80-odd stations belonging to R. S. Robie, Inc., and U-Dryvit—though again part of the Hertz system—have operated under the Avis banner. They have relayed reservations to other Avis stations around the country instead of to Hertz and they have continued to send money into the Avis advertising pool, but they have been sending their profits to Hertz.

This odd business practice has been followed because of the agreement under which Robie sold his stations. The outlets were to remain with one foot in the Avis camp until Avis could establish or build up outlets of its own.

After all, Robie still owned Avis at the time and he didn't want to impair its salability.

Meanwhile, what of Sawyer who had lined up with Hertz? He reappeared in the syndicate of Boston investors last week that bought Avis. In fact, he is Avis' new board chairman.

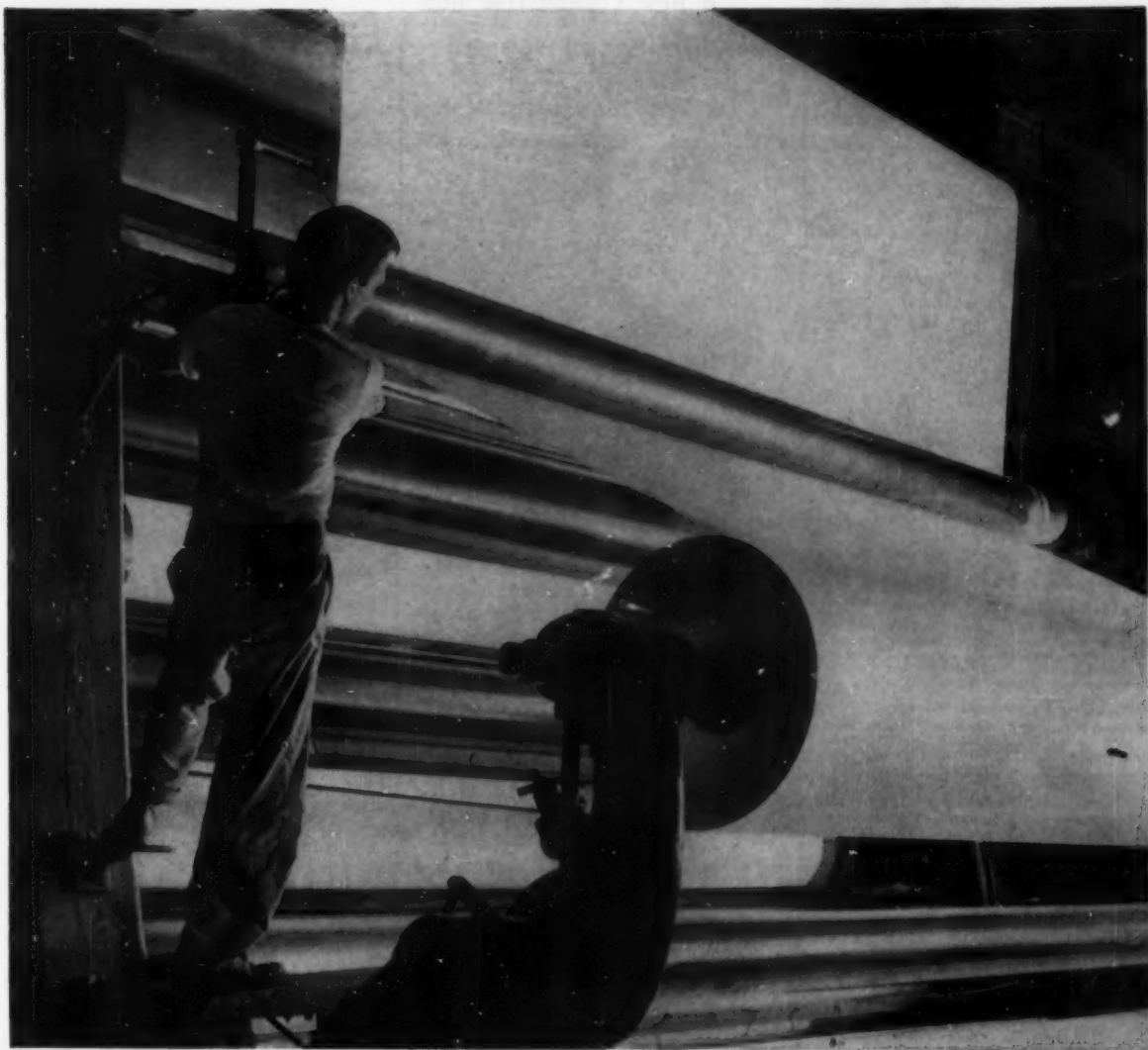
Frederick C. Dumaine Jr., former president of the New Haven Railroad will be treasurer and chairman of the executive committee, and William B. Snow, president of the Dumaine controlled Amoskeag Co. will head up the Avis finance committee. Meanwhile, Robie is slated to become an officer for Hertz.

• **Painters' Paradise**—Last week, the Hertz stations in Boston were still doing some business for Avis and the Avis stations were still doing business for Hertz. Furthermore the wrong signs were on the car lots. Nobody was particularly happy about the situation except the sign painters who, said a Hertz official, "will be the only ones to make money out of all this."

This same Hertz official added, "In the next couple of days the players will be switched back and everyone will be on the right side of the scrimmage line."

"It is a sort of complicated deal," admits Avis. The switch has been held up so far but it's expected momentarily.

• **Both Get Bigger**—All through the



FIRST with the paper making industry ...NIBROC® TOWELS



American paper manufacturers—men who know paper best—put more Nibroc Towels in their washrooms than any other paper towel.

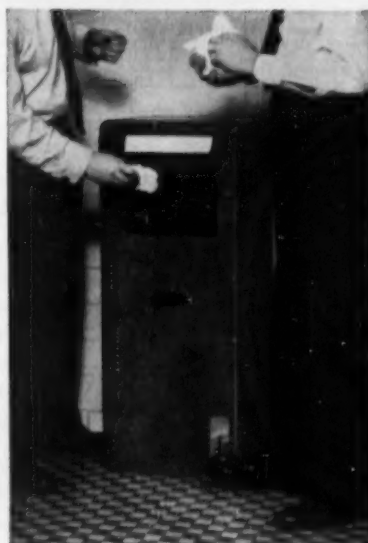
The same is true in business, industry and institutions all over the U. S.

- 1.** Nibroc Towels are tailor-made to fit your hands.
- 2.** Come from cabinet flat and ready to use instantly.
- 3.** Available in various sizes—in either white or tan.

4. Only with Nibroc—can you get the exclusive TAMP®, which slashes maintenance costs, ends washroom mess, reduces fire hazard. Packs *five times more* waste in receptacle.

5. Ask us to prove guaranteed savings with Nibroc "3-T Thrift Plan"—Towels, TAMP, Tissue. Lowest annual cost per employee.

6. See TAMP in action! Ask your dealer; he's listed under Paper Towels in the Yellow Pages. Or write Dept. DN-9, Brown Co., 150 Causeway St., Boston 14, Mass.



NEW NIBROC TAMP . . . Pull out towel. Step on pedal. Drop towel in chute. TAMP does the rest.

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of Management
Men's Problems

Published: Weekly—closes 12 days
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ads), minimum 2 lines.

To Estimate: Count 5 average words
per line.

Box Number: Count as 2 words.

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We do the rest. Get details of this easy,
appropriate way to end your company Xmas
gift problems now. Write Maritz Sales Build-
ers, 4200 Forest Park Blvd., St. Louis 8, Mo.

"... a new competitor has
been lurking on the side-
lines..."

STORY starts on p. 192

chaotic period this summer when many
station managers haven't had a clear
idea of what was going on or for whom
they were working even with a score-
card, the two companies continued to
grow.

Hertz has shot up by bringing
Robie's stations back into the fold, by
buying some licensees out and turning
them into owned stations, and by sign-
ing up more licensees. Recently the
Chicago based company announced it
was buying 15,600 new-model cars
(BW-Sep.22'56,p36). This would
bring its expected fleet for 1957, allow-
ing for the cars it sells, to 20,700 autos
or 20% more than last year.

Despite the loss of stations and cars
that Avis suffered when Robie sub-
tracted his Boston operations from the
system, the second biggest company
will open its 1,000th station soon. It
now claims that it is in 700 cities
across the U.S. and in 22 foreign
countries.

• **Bus Tie-in**—In another development,
Avis has negotiated with Continental
Trailways Bus System for a tie-in. The
bus system has 43 affiliated companies
with approximately 3,000 stations and
agents. Under the terms of the agree-
ment any one of these could sell a pas-
senger a ticket on a bus and reserve a
car for him at his destination.

• **Added Starter**—While Hertz and
Avis have been swapping outlets in
Boston this summer, a major new com-
petitor has been lurking on the side-
lines ready to pounce into the industry.
The new competitor is Greyhound
Corp. With millions of dollars and with
ticket stations across the country, it
poses a real threat to the big two.

Already Greyhound has entered what
it terms the "fast growing and highly
profitable" car rental business through
a newly formed subsidiary Greyhound
Rent-A-Car Inc. So far it has concen-
trated on leasing fleets of cars to com-
panies, a side of the business that both
Hertz and Avis are already in.

Greyhound also has its eye on indi-
vidual car rentals. Rumor in the in-
dustry has it the big bus company is
dickering with one of the nation's
largest independents, a key member of
National Car Rental System.

Greyhound is already sending out
signs and credit cards in preparation
for getting into the business and ex-
pects to be in full swing in a few cities
not long after the 1957 model cars
come out. **END**

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locations where

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all year 'round.

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engineer owns a
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tegrated gas utility. Maximum age,
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There'll Be Pie in the Sky

A subtle, but significant, change can be marked in political campaigning over the last two decades. The promise has yielded to the vision. Very rarely now does a candidate for high office make a flat commitment to do this or that. Instead he draws a glowing picture of some inviting goal to which the policies he espouses will lead us all.

In the present campaign, competition between the parties seems to be centering on which can make the more convincing claim to being the helpful handmaiden of a better future. Accordingly, visions of the new tomorrow are coming thick and fast. Vice-Pres. Nixon's picture of the future has us contemplating the four-day work week. Candidate Stevenson offers us his "New America" in which older people will retire from their jobs with no diminution in their standard of living. Some comment seems in order on both of these previews of a quite possibly attainable Utopia.

Nixon's Four-Day Week

Speaking in Colorado Springs, Nixon foresaw the four-day week in the "not too distant future" as one of the "projections of the gains we have made in the last four years." Nixon asserted that to accomplish this, and other great social and economic advances, we need a continuation in office of the present Administration. He characterized the philosophy of that Administration as one that shuns the Democratic Party thesis of "Let government do it all."

Stripped of its political partisanship, without which no speech would be complete in this particular season, what Nixon is claiming is that the climate and objective conditions that the Eisenhower Administration has provided have created a prosperity and a confidence in which business and organized labor have been able to carry the standard of living to unprecedented heights. He could have cited the coming of Supplementary Unemployment Benefits, that step toward the guaranteed annual wage, as an example of the advances nurtured in such a climate. And he could have pointed out that SUB came from free enterprise and not by government action or fiat.

It is central to the Republican point of view that a maximum of freedom for the economy will make the economy strong and able to afford the costs of such things as SUB and the four-day week. To impose them from Washington would be to hobble the economy and make it unable to bear such burdens.

That it is not differences over the four-day week, but differences over how we get it that makes the real division between Republicans and Democrats was immediately apparent in Walter Reuther's retort to Nixon. Reuther followed Nixon's address with a demand that either the Republican Party support legislation for the four-day week or admit

that Nixon's speech was merely "political expedience." It should not be forgotten that, in addition to being an important Democrat, Reuther is president of the union that negotiated the pilot SUB program with the auto industry—without government enactment, ukase, or fiat.

Stevenson's Plan for the Aged

Stevenson's statement on the problems of older people proposes that we boldly assert, as a basic article of belief, "that in this age of abundance in this land of plenty, a person should be enabled to maintain, when life's regular duties are completed, his or her accustomed standard of living."

He spells out a number of specific measures.

- Enacting legislation to prevent discrimination in employment on account of age.
- Establishing an Office of Older Persons' Welfare in the Dept. of Health, Education and Welfare.
- Increasing the income last retired persons could earn without losing Social Security benefits.
- Redetermination of the adequacy of existing Social Security benefits.
- More housing designed for older persons.
- Congressional study of a program of hospital insurance for the aged.
- Increased Federal appropriations to support research on heart disease, mental illness, arthritis and other diseases which particularly afflict the aged.
- Educational programs to make increased leisure a blessing, not a curse, to old people.

But the important thing, Stevenson argues, is acceptance as an attainable goal of the idea—that a person's income should not abruptly fall off when he reaches age 65 and that he can go on working if he wants to.

Stevenson seems clearly to realize that there are many routes to the objective. The individual, he insists, working in a free economy, must be expected to make—through savings, insurance, pension plans and other arrangements—as large a contribution as possible to his own welfare after retirement.

From Vision to Reality

Neither Stevenson's goal nor Nixon's are beyond reach. But, as both the candidates seem to recognize, the achievement of the goals must come through the operation of the enterprise system that is characteristic of the U.S. They cannot come through government fiat, but only through a combination of economic and political forces. In this combination, the role of the government must be to encourage the natural capacity for growth that the economy already has demonstrated. For no government—in this country or anywhere—can simply order that pie-in-the-sky shall now be served up.



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